DOCUMENT RESUME

ED 067 782 EC 050 050

TITLE	Guidelines for Educational Facilities for Hearing Impaired Children.
INSTITUTION	Westinghouse Learning Corp., Palo Alto, Calif. Davis MacConnell Ralston Div.
PUB DATE	70
NOTE	277p.
EDRS PRICE	MF-$0.65 HC-$9.87
DESCRIPTORS	*Aurally Handicapped; Building Design; *Educational Facilities; Educational Needs; *Exceptional Child Education; *Guidelines; *Regional Programs

ABSTRACT

Facility specifications for regional planning centers for hearing impaired children are presented which are said to reflect the belief that the development of school facilities should be generated by educational objectives. The proposed regional programs would draw children from a number of counties and local school districts to a centrally located school facility. Educational considerations including characteristics and educational needs of children with hearing impairments, professional staff, evaluation, diagnosis, research, school family relations, learning activities, and organizational factors are discussed briefly. Conceptual plans and facility specifications are given with regard to architectural considerations, instructional learning areas, a children's educational evaluation center, an administration area, a learning resources center, service areas, outdoor areas, and a mobile unit. Components of the instructional learning areas such as large group area, instructional unit area, tutorial area, counseling area, teacher planning area, learning experiences center, and special facilities are discussed and diagramed. Offices, conference areas, research areas, and a professional library are projected and schematized for the evaluation center. Other areas such as the service and outdoor areas are similarly described and illustrated. (GW)

ED 067782

EDUCATIONAL SPECIFICATIONS

GUIDELINES FOR EDUCATIONAL FACILITIES FOR HEARING IMPAIRED CHILDREN

EC 050 058E
ABSTRACTED - CEC ERIC

STATE OF ILLINOIS

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BY

DAVIS MACCONNELL RALSTON

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PREFACE

This document was prepared as part of the statewide action of Illinois to expand and to improve the educational programs and services for children handicapped by loss of hearing. It was believed that, in order to support the regional planning of the State and to provide an additional tool for the improvement of the educational program, school facilities for hearing impaired children should be designed to meet the specific purposes of the educational program.

The Educational Consulting firm of Davis MacConnell Ralston, a division of Westinghouse Learning Corporation, was retained to develop such designs. The Consultants recognize the importance of the educational plans and understand that the development of school facilities must generate from these plans. School facilities must work for the program and the staff of professionals charged with the responsibility of program implementation. The facility specifications contained in this document reflects this and the particular plans for the education of hearing impaired children and youth in Illinois.

These specifications were prepared in cooperation with the Division of Special Education of the Office of the Superintendent of Public Instruction and the Chicago Board of Education as well as with personnel working with hearing impaired children throughout Illinois. Supportive data was obtained from the report of the Illinois Commission on Children, A Comprehensive Plan for Hearing Impaired Children in Illinois, and published and unpublished studies from the State of Illinois.

We respectfully submit these specifications as additional support for the development of your program and gratefully acknowledge the valuable assistance of the many persons who gave freely of their time and talent in the development of these Educational Specifications, specifically,

Hazel Bothwell
Assistant Director, Deaf and Hard of Hearing
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Respectfully submitted,

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INTRODUCTION

The growth and development of the educational program for children with in the State of Illinois covers many years and many difficult periods. considered a major breakthrough as each succeeding step was contributor success of the program of special education is so because of a long suc working at all levels in private, and public sectors to gain effective public recognition of the needs of children of all backgrounds faced wi public or private schools.

Date of Legislative Action

Although the single results may not have been dramatic, they have paved opportunities for the children. The net result of supportive legislati

1943 Illinois stands out as one of a very few states that believes sufficien child to support financially the education of its children with special leader in this program that dates back through many years but specifica enacted a law providing a major plan for financial support to school di special education classes for children ages 3 through 21.

1947 Transportation reimbursement for non-resident children attending progra one of the provisions of legislation in 1947. This had the effect of b improving the organization of groups of children by increasing the numb

1957 By 1957, laws were written permitting joint agreements among school dis dation of programs by allowing two or more districts to work together i grams thus providing an organizational structure by which special educa regions.

1963 Each additional legislative act focused more directly on particular nee designed for hearing impaired children was passed increasing the amount programs for hearing impaired children.

The State Department of Public Instruction revised the Special Educatio minimum standards for education programs for the hearing impaired. As tions:

1964 An Advisory Council was appointed to study and upgrade the prep

A required minimum of six elementary classes and a pre-school w program with provision for the secondary level. Minimum standa and supervision of the program by an educator of the deaf becam

INTRODUCTION

opment of the educational program for children with special learning handicaps
nois covers many years and many difficult periods. Not any one item can be
reakthrough as each succeeding step was contributory to the one following. The
am of special education is so because of a long succession of individuals and groups
s in private, and public sectors to gain effective legislation, financial support and
f the needs of children of all backgrounds faced with limitations to their success in
hools.

results may not have been dramatic, they have paved the way toward better educational
e children. The net result of supportive legislation to date is that the State of
as one of a very few states that believes sufficiently in the quality of the individual
ancially the education of its children with special learning handicaps. Illinois is a
am that dates back through many years but specifically to 1943 when the Legislature
ing a major plan for financial support to school districts that conducted approved
asses for children ages 3 through 21.

ursement for non-resident children attending programs in other school districts was
s of legislation in 1947. This had the effect of broadening the population base and
zation of groups of children by increasing the number of children accepted.

ritten permitting joint agreements among school districts. This stimulated the consoli-
y allowing two or more districts to work together in conducting special education pro-
an organizational structure by which special education services could be expanded by

slative act focused more directly on particular needs. In 1963, legislation specifically
impaired children was passed increasing the amount of reimbursement for pre-school
impaired children.

of Public Instruction revised the Special Education Rules and Regulations to establish
education programs for the hearing impaired. As a result of these new Rules and Regula-

ouncil was appointed to study and upgrade the preparation of teachers of the deaf.

nimum of six elementary classes and a pre-school were specified for an approved
provision for the secondary level. Minimum standards for evaluation were established
on of the program by an educator of the deaf became required.

1965 year, later State agency personnel appealed to the Illinois Commission on C
bringing focus to crucial statewide needs of children with hearing impairments.
this request and established a Committee on the Hearing Impaired to study the n
tions for action.

1965 Also in 1965, House Bill 1407 was passed making mandatory that all school distr
educational programs for all special education children by July 1, 1969. Each
prepare and submit planning guidelines to the State Superintendent of Public In
by July 1, 1967. Such guidelines had to be consistent with the Rules and Regul

1967 The Committee on the Hearing Impaired completed its study in 1967 and made its
Commission. This report reinforced the need for comprehensive regional progra

1968 The Commission published their committees' study in A Comprehensive Plan for He
Illinois. Significant recommendations were made by the Committee as means of i
educational services to all children within the State and the regional planning
The major responsibility for implementing legislative acts and assisting in the
plans for the education of hearing impaired children rests with the Office of t
Instruction. The specific task of day to day work with local districts, regio
coordination of university training programs with educational programs for chil
tion of the state program is accomplished through the Department of Special Edu
and Evaluation.

1969 One of the recommendations of the Illinois Commission resulted in Senate Bill 3
responsibility for developing rules and regulations for hearing conservation wi
Health and the State Superintendent of Public Instruction. SB 324 made mandato
all children in any child care program, public or private, shall receive hearin
their first year in any such program. A comprehensive approach by all State ag
this commitment by the State.

Working committees have been established by the Department of Special Educatio
Evaluation to assist in the overall program development. The Committees do not
but serve in an advisory capacity. Members of the Committees are drawn from th
represent the professional, university, public schools and private sectors as w
impaired children and the deaf community itself. Committees for the following

Teacher Preparation
Audiological Services to Children
Regional Supervisors of Educational Program Development

te agency personnel appealed to the Illinois Commission on Children for assistance in
rucial statewide needs of children with hearing impairments. The Commission acted upon
tablished a Committee on the Hearing Impaired to study the needs and to make recommenda-

Bill 1407 was passed making mandatory that all school districts develop and provide
s for all special education children by July 1, 1969. Each county was obligated to
planning guidelines to the State Superintendent of Public Instruction for approval
uch guidelines had to be consistent with the Rules and Regulations of Special Education.

e Hearing Impaired completed its study in 1967 and made its first report to the Illinois
eport reinforced the need for comprehensive regional programs for the hearing impaired.

ished their committees' study in A Comprehensive Plan for Hearing Impaired Children in
unt recommendations were made by the Committee as means of improving the quality of
s to all children within the State and the regional planning concept was again reinforced.
ility for implementing legislative acts and assisting in the development of Statewide
tion of hearing impaired children rests with the Office of the Superintendent of Public
pecific task of day to day work with local districts, regional planning committees,
versity training programs with educational programs for children, and overall coordina-
rogram is accomplished through the Department of Special Education Program Development

dations of the Illinois Commission resulted in Senate Bill 324. SB 324 fixed joint
developing rules and regulations for hearing conservation with the Department of Public
e Superintendent of Public Instruction. SB 324 made mandatory, by July 1, 1970, that
child care program, public or private, shall receive hearing test services during
any such program. A comprehensive approach by all State agencies is now possible with
the State.

have been established by the Department of Special Education Program Development and
t in the overall program development. The Committees do not have policy making powers,
isory capacity. Members of the Committees are drawn from throughout the State and
ssional, university, public schools and private sectors as well as parents of hearing
nd the deaf community itself. Committees for the following advisory areas are formed:

r Preparation
ogical Services to Children
al Supervisors of Educational Program Development

Research
Administration and Finance

The major State Advisory Council on the education of hearing impaired
Commission, is in the process of organizing itself through the effort
in cooperation with the Department of Children and Family Services.

The design for education of hearing impaired children is moving ahead
about handicapped children, from the results of better research on ho
ment of technological advances and from the desire to have all childr
society as possible. Legislation of the past three decades has made
changes. Commission studies, committee reports and concerns of paren
awareness of the critical nature of the problems of hearing impairmen
program improvements possible.

e education of hearing impaired, as recommended by the Illinois
izing itself through the efforts of the Office of State Superintendent
Children and Family Services.

paired children is moving ahead as a result of new public attitudes
esults of better research on how children learn, from the develop-
m the desire to have all children as much in the mainstream of
he past three decades has made possible financial and organizational
e reports and concerns of parents have begun to create a public
e problems of hearing impairments of the children and are making

IMPLICATIONS FOR REGIONAL PLANNING CENTER

Because of the handicap imposed by a hearing impairment upon language and co
retardation of academic and psycho-social development, the hearing impaired c
instructional approaches supplemented by appropriate educational tools. In c
child, a comprehensive educational program must involve a multitude of servic
fication and parent education coordinated with State and local resources, inc
vocational counseling and research. Such services are not meant merely to su
aspects of any program for the hearing impaired but are pre-requisites to its

Until minimum standards were established in 1964, many hearing impaired child
day class programs scattered throughout the State. Many of the hearing impai
metropolitan areas of Illinois are currently enrolled in day class/school pro
for fulfilling the necessary pre-requisites. The remainder of the hearing im
those from small urban and rural areas that make up the majority of the State
residential school or in small day class programs. Although both the residen
programs offer some distinct advantages both encounter serious obstacles to t
program.

Residential facilities are generally located far from the child's community a
contact with his family as well as with the hearing world. The limited stude
class programs restrict the in-depth educational programming essential for th

Hard of hearing children also have need for specialized educational opportuni
children in small urban and rural areas are generally characterized by: inad
procedures, inadequate diagnosis or continuous evaluation services, and insuf
With proper planning the hard of hearing child should be able to participate
supplemented by a variety of services such as: auditory instruction with amp
or resource room instruction, increased use of media, and speech therapy. Th
exceptions) would be expected to remain within their school districts which w
consultive and evaluative services from the central region.

If all hearing impaired children, whether from the large urban, small urban or
are to participate in educational programs designed to provide for their optim
new approaches must be investigated, devised, evaluated, developed and impleme

ATIONS FOR REGIONAL PLANNING CENTER

a hearing impairment upon language and communication and the resultant
social development, the hearing impaired child requires specific
ed by appropriate educational tools. In order to accommodate such a
program must involve a multitude of services ranging from early identi-
inated with State and local resources, including pre-vocational and
Such services are not meant merely to supplement the instructional
ing impaired but are pre-requisites to its ultimate success.

ished in 1964, many hearing impaired children were educated in small
nout the State. Many of the hearing impaired children within the few
currently enrolled in day class/school programs that have the potential
quisites. The remainder of the hearing impaired children, especially
eas that make up the majority of the State, are educated in the State
class programs. Although both the residential and the small day class
ages both encounter serious obstacles to truly comprehensive educational

y located far from the child's community and home, thereby restricting
with the hearing world. The limited student populations of small day
n educational programming essential for the hearing impaired.

need for specialized educational opportunities. Programs for these
reas are generally characterized by: inadequate identification
continuous evaluation services, and insufficient educational planning.
aring child should be able to participate in the regular school program
es such as: auditory instruction with amplification, educational tutoring
ised use of media, and speech therapy. These children (with but a few
ain within their school districts which would be provided with special
from the central region.

ether from the large urban, small urban or rural areas of Illinois,
rograms designed to provide for their optimal learning opportunities,
devised, evaluated, developed and implemented.

The most likely answer seems to be a program located within a short distance of and their families to provide daily, or, at the maximum, weekly involvement with one consisting of sufficient class units to make financially and organizationally educational and diagnostic program.

In order to broaden the enrollment, a population base of larger scope would be n agreements with a larger number of county units would be essential. Such a prog provisions for the accommodation of a proportion of residential children, would program in its orientation and mode of operation. It would be located immediate a part of one or more public schools. This type of program can most effectively implemented through regional planning and might be cooperatively financed by loc federal funding.

The significant aspects of such a regional educational program would include:

- a comprehensive hearing conservation program
- a pre-school program which includes parental instruction, home visitation garten classes
- a program of language, speech, and subject matter for those hard of heari their local public school
- a centralized facility for children with severe communication problems nee skilled auditory and visual instruction
- extended educational levels to enhance individual progress and learning de
- use of the newest concepts in educational procedures, instructional media
- curricular and extra-curricular interaction with hearing children
- extended educational provisions for children with multi-learning handicaps
- pre-vocational and vocational opportunities and counseling for intermediat
- effective coordination of teaching practices with curriculum planning
- inclusion and involvement of the child in the day to day activities of his
- increased home-school contact, parent education and counseling
- an interim program for severely hard of hearing children who require full with specially trained teachers

a program located within a short distance of the homes of the children
, or, at the maximum, weekly involvement with family activities; and
units to make financially and organizationally practical a comprehensive

a population base of larger scope would be required. Cooperative
county units would be essential. Such a program, although including
a proportion of residential children, would essentially be a day
of operation. It would be located immediately adjacent to or become
. This type of program can most effectively be developed and
g and might be cooperatively financed by local, county, state, and

gional educational program would include:

rvation program
cludes parental instruction, home visitation, nursing and kinder-

, and subject matter for those hard of hearing children who attend

ildren with severe communication problems necessitating highly
nstruction
o enhance individual progress and learning development
educational procedures, instructional media and auditory education
ar interaction with hearing children
ns for children with multi-learning handicaps
opportunities and counseling for intermediate and upper grade children
ching practices with curriculum planning
the child in the day to day activities of his family and his community
, parent education and counseling
ly hard of hearing children who require full time intensive work
rs

In addition, a regional program would provide in-depth and continuing diagnostic and eva
including:

- screening and early identification of children with hearing loss in coordination
  state services
- a source of recommendations concerning medical treatment, educational and auditor
- a coordinating and consulting service for local-based education and therapy prog
  of hearing children
- a center for basic and applied research
- a teacher training center
- comprehensive educational evaluations
- consultant otological and medical services
- vision screening and ophthalmological referral

EDUCATIONAL CONSIDERATIONS

The proposed regional programs would draw children from a number of counties and local sc
to a school facility centrally located within a public school building. Children would a
Education and Evaluation Center designed specifically for their education and evaluation.
Center, a coordinated program under the direction of a qualified educator of hearing impa
by a staff of qualified professionals would be possible.

Planning along the lines of the Committee Report has progressed in all counties of the St
greater extent than others. Planning parameters for a Regional Center have been suggeste
and include:

a. Provision for the education of deaf children from the pre-school through the seco

b. Capability of enrolling a minimum of 80-100 children who live within an approxima
   of two hours from school.

c. Provision for residential arrangements for those who need it only during the regu
   with all children required to return home over weekends.

Increasing the number of children can bring an increase in the number of levels required
educational program for each child. Additional instructional units, staff and professiona
be employed. Diagnostic personnel can be added to the staff. Expanded learning experienc
programs, in-depth diagnostic and evaluatory sequences can result from more centralized pr
necessary centralization may result from the cooperative efforts of many school districts
educational opportunities for all the children. Such cooperation may necessitate new orga
consideration and planning for sources of personnel, income, materials, and equipment and
construction of facilities designed to the educational program.

l program would provide in-depth and continuing diagnostic and evaluatory services

arly identification of children with hearing loss in coordination with local and

ommendations concerning medical treatment, educational and auditory planning
and consulting service for local - based education and therapy program for hard
dren
sic and applied research
ing center
ducational evaluations
ogical and medical services
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IONS

programs would draw children from a number of counties and local school districts
entrally located within a public school building. Children would attend a Regional
on Center designed specifically for their education and evaluation. Within this
program under the direction of a qualified educator of hearing impaired and supported
d professionals would be possible.

es of the Committee Report has progressed in all counties of the State, some to a
ners. Planning parameters for a Regional Center have been suggested by the Committee,

the education of deaf children from the pre-school through the secondary levels.

enrolling a minimum of 80-100 children who live within an approximate travel time
om school.

esidential arrangements for those who need it only during the regular school week
en required to return home over weekends.

f children can bring an increase in the number of levels required to provide an
each child. Additional instructional units, staff and professional personnel can
c personnel can be added to the staff. Expanded learning experiences, continuous
nostic and evaluatory sequences can result from more centralized programs. Any
n may result from the cooperative efforts of many school districts to provide better
es for all the children. Such cooperation may necessitate new organizational patterns,
ing for sources of personnel, income, materials, and equipment and the location and
ies designed to the educational program.

All of these concerns, are presently being considered by regional planning committ
progressing to the point of needing educational facilities. Pressures for enrollm
Bill 1407 are taxing school district educational space.

School facilities must be designed to accommodate the educational program. In ord
the characteristics of the program and characteristics of the children and youth w
school must be described. This section of the document will provide this detailed

I. CHARACTERISTICS OF CHILDREN WITH HEARING IMPAIRMENTS

Degree of Loss Along a Continuum from Slight to Profound		Effect of Loss or Understanding
Slight 16 dB to 29 dB (ASA)*		May have difficulty hearing fain May have some difficulty in scho
Mild 30 dB to 44 dB (ASA)	Considered as Local District Responsibility with Placement in District classes	Understands conversational speec feet and face to face May miss as much as 50% of discu faint or not in line of vision May exhibit limited vocabulary a
Marked 45 dB to 59 dB (ASA)		Verbal communication must be lou Difficulty in situations requiri discussions.
	Grey Area for Responsibility	Likely to have defective speech. Likely to be deficient in langua Evidences of limited vocabulary.
Severe 60 dB to 79 dB (ASA)	Considered as Regional Responsibility with Placement in Regional Center	May hear loud voices one foot fr May identify environmental sounds May discriminate vowels but not a Speech and language defective an if loss was present prior to o
Profound 80 dB or more (ASA)		May hear loud sounds, more aware pattern. Relies on vision, rather than hea communication. Speech and language defective an if loss present prior to one y

*American Standards Association figures are used only for purposes of describing a range of loss. The International S
publish ranges for degree of loss but are not included in this document.

eing considered by regional planning committees. Plans are
ucational facilities. Pressures for enrollment created by House
ducational space.

accommodate the educational program. In order to accomplish this,
characteristics of the children and youth who will occupy the
n of the document will provide this detailed description.

EARING IMPAIRMENTS

rom	Effect of Loss or Understanding of Language and Speech
	May have difficulty hearing faint or distant speech. May have some difficulty in school situations.
as rict lity ment t classes	Understands conversational speech at a distance of about 3-5 feet and face to face May miss as much as 50% of discussions if voices are faint or not in line of vision. May exhibit limited vocabulary and speech anomalies. Verbal communication must be loud to be understood. Difficulty in situations requiring participation in group discussions.
for lity	Likely to have defective speech. Likely to be deficient in language usage and comprehension. Evidences of limited vocabulary.
as esponsi- n Place- gional	May hear loud voices one foot from the ear. May identify environmental sounds. May discriminate vowels but not all consonants. Speech and language defective and will not develop spontaneously if loss was present prior to one year of age.
	May hear loud sounds, more aware of vibrations than tonal pattern. Relies on vision, rather than hearing as primary avenue of communication. Speech and language defective and will not develop spontaneously if loss present prior to one year of age.

gures
cribing a range of loss. The International Standards Organization also
but are not included in this document.

These categories prevail along a continuum of hearing in identifying degree of loss, a
for this purpose more generalized terms are useful in education planning. While impor
it is more useful to think educationally in two categories, deaf and hard of hearing.
severe or profound hearing loss are considered deaf; with mild or moderate loss as har
Either a child has characteristics as a deaf child and needs the benefit of a program
degree of loss, or as a hard of hearing child.

Each child has varying potentials for learning, influenced by such factors as degree a
hearing loss, mental ability, physical capabilities and home environment, as well as p
tions caused by other learning handicapping conditions. It is essential that all chil
impairment receive education relevant to their changing functional needs on the basis
qualities. Decisions about educational program should be made in connection with an e
the child functions with the hearing loss rather than by degree of loss alone.

Children with Multiple Handicaps

An unpublished report of a survey questionnaire conducted through the Illinois State D
over 400 children with Special Education needs. All but a few are in school programs
many teachers felt that present programs are inadequate and that new types of learning
devised that are more suited to the needs of these children with multiple problems. U
evaluation center is the first consideration and also new types of educational approac
environmental settings are essential.

II. EDUCATIONAL NEEDS OF CHILDREN WITH HEARING IMPAIRMENTS

Deaf Children Require:

Specialized instruction in language and concept development utilizing combined
methodology with auditory and speech training. The earlier this training is be
are the child's chances to develop adequate language and the input of knowledge
capacity to acquire language is now thought to be transitory reaching a peak ar
four and diminishing thereafter, early education of the hearing impaired child

Early education of the very young deaf child is usually begun with a strong auc
There will, however, be a wide variation in the educational needs of hearing im
Such individual differences will demand that full use be made of both the audit
avenues of learning.

vail along a continuum of hearing in identifying degree of loss, and while important
e generalized terms are useful in education planning. While important for diagnosis,
think educationally in two categories, deaf and hard of hearing. Children with
earing loss are considered deaf; with mild or moderate loss as hard of hearing.
haracteristics as a deaf child and needs the benefit of a program designed for this
s a hard of hearing child.

ng potentials for learning, influenced by such factors as degree and age of onset of
ability, physical capabilities and home environment, as well as possible limita-
learning handicapping conditions. It is essential that all children with a hearing
ducation relevant to their changing functional needs on the basis of their individual
about educational program should be made in connection with an evaluation of how
ith the hearing loss rather than by degree of loss alone.

e Handicaps

of a survey questionnaire conducted through the Illinois State Department revealed
Special Education needs. All but a few are in school programs of some type. However,
at present programs are inadequate and that new types of learning situations should be
suited to the needs of these children with multiple problems. Utilization of an
he first consideration and also new types of educational approaches in suitable
are essential.

OF CHILDREN WITH HEARING IMPAIRMENTS

ire:

struction in language and concept development utilizing combined visual and oral
th auditory and speech training. The earlier this training is begun, the better
s chances to develop adequate language and the input of knowledge. Since the
quire language is now thought to be transitory reaching a peak around age two to
ishing thereafter, early education of the hearing impaired child becomes imperative.

n of the very young deaf child is usually begun with a strong auditory-oral approach.
wever, be a wide variation in the educational needs of hearing impaired children.
differences will demand that full use be made of both the auditory and visual
rning.

For most hearing impaired children, the auditory channel, even though impaired, will initially be the primary modality for language learning. For these children, full utilization should be made in the use of modern amplification equipment and in the training of the residual hearing at home and at school.

For other hearing impaired children, vision will be the primary avenue for language learning. For some children, combined visual methods of instruction should be considered, using both oral and manual communication (fingerspelling and/or language of signs) in the most effective manner possible, at home and at school. The time for incorporating this combined method of communication instruction should be based on a thorough evaluation of the child.

Grouping is extremely important in the education of deaf children. Effective grouping is complicated by a combination of factors including age, onset of loss, secondary handicaps, mental capabilities, language facility, and communication skills. Although it is generally agreed that class units ought to contain 6 to 7 children, a sufficient number of units are necessary to provide a range of placement opportunities as well as allowing ease of mobility as a child grows in any one of these factors and requires a new learning unit. For deaf children, a minimum of 12 to 15 units appear to be necessary to provide flexibility in program variations.

It is important that this child develop a familiarity with the culture of the hearing world by direct participation in daily family activities and through interaction with hearing siblings and peers. Activities in the home and neighborhood may diminish the potential cultural handicap of the deaf child.

The deaf child should be given every chance to participate in the opportunities of his community as soon and as much as possible. To this end, deaf children can best accomplish this in day class programs in his community area. Although integration of deaf children in regular hearing classes at school is a long and difficult process, involvement with hearing children is not. Highly successful classes of deaf children,able to associate at-will with hearing classes, may be a more valuable program than a pretense of integration. Providing opportunities for participation in hearing group activities when the child feels he wants to, may offer greater success than any other design.

One of the prime causes of difficulty in providing programs for deaf children is the sparsity of the deaf population. Various incidence figures are reported for the deaf, depending upon methods of testing and criteria used to define "deafness". Based upon K-12 public and private school enrollment figures for the United States for 1964 of 48,200,000 and comparable figures for programs for the deaf, the incidence is approximately .05% or 5 in 10,000.[1]

[1] A Comprehensive Plan for Hearing Impaired Children in Illinois, Illinois Commission on Children, May 1968, p. 75

These figures become meaningful educationally when considering the optimum class size of 6 to 7 children per unit. A community of 25,000 population might expect to have approximately 3 deaf children. Other extrapolated ratios of total population to deaf children are 50,000/6; 100,000/12.5; 250,000/30; 500,000/62.5

Hard of Hearing Children Require:

Comprehensive services. Children with mild to moderate hearing impairments do develop some language and communication skill. The child may have limited information input unfamiliar in its content resulting in confusion in concept formation. However, some of these children may have defective language and communication and must often develop additional communication skills through use of amplification and specialized instruction. Comprehensive medical, audiological, evaluative and educational services are essential.

All hard of hearing children should be considered to be the responsibility of the local school district. Some other hard of hearing children need full-time programs of specialized teaching for at least a part of their school years. Severely hard of hearing children, for example, often require extensive programs in special classes for a number of years with gradually decreasing amounts of special work and increasing participation in regular classes.

Because the hard of hearing child develops some language independently, his real needs are frequently overlooked, a situation that often compounds his problems. Counseling and guidance services are important to develop a good attitude of self in the child with mild hearing loss.

There is confusion in incidence figures available concerning numbers of hard of hearing children attending regular school classes. However, a general estimate of 5% is used by many sources. A spectrum of educational services are needed in most special education districts.

Multi-Handicapped Children Require:

An enriched school setting. Increasing numbers of hearing impaired children are identified as multi-handicapped. Providing an effective learning situation for children with combinational effects of deafness and mental retardation, language disorders, emotional disturbance, cerebral palsy, and visual impairment requires some advance thinking and development.

Programs must be designed to develop language and communication skills for deaf children while at the same time prepared to do so within the framework of the secondary handicap.

Use of many manipulative materials and instructional aids are essential.

The tasks facing educators of these children are:

- developing appropriate diagnostic procedures, providing con
- developing specialized instructional programs and appropria
- defining reasonable limits regarding the types and degrees served in the various educational programs.
- participating in the placement in appropriate programs and profit from educational programs under their direction.

III. PROFESSIONAL STAFF CONSIDERATIONS

Curriculum coordinators and supervisors should be experienced t their other qualifications. It is their responsibility to main consistency in procedures, provide a stimulus for development o curriculum development, encourage in-service programs, and perf ble for the classroom teachers.

An adequate number of qualfied teachers should be employed. Ho teachers prevails due to the expansion of existing programs, th attrition. There is an additional problem, the need to upgrade professional competence in keeping with new techniques and rese impaired.

Universities and other training institutions may undertake to a in the profession, but they cannot do this alone. The schools n single experience of all in the teacher preparation programs is day classroom observation and practice teaching opportunities wi abilities and age levels. To provide selective placement to ena in a variety of teaching experiences, and to observe optimal adm tic practices, a specialized facility needs to be available.

The basic staff for such a facility should include the following

ors of these children are:

ate diagnostic procedures, providing continuous evaluation procedures.
ed instructional programs and appropriate learning facilities.
limits regarding the types and degrees of multi-disabilities that can be
s educational programs.
placement in appropriate programs and facilities those children who cannot
nal programs under their direction.

DERATIONS

and supervisors should be experienced teachers of the deaf in addition to
ns. It is their responsibility to maintain instructional quality, guide
s, provide a stimulus for development of new ideas and techniques, direct
encourage in-service programs, and perform as program coordinators responsi-
achers.

alfied teachers should be employed. However, an acute shortage of trained
the expansion of existing programs, the establishment of new ones and teacher
additional problem, the need to upgrade the general quality of teaching and
in keeping with new techniques and research in the education of the hearing

raining institutions may undertake to alleviate these shortages and weaknesses
ney cannot do this alone. The schools must cooperate, for the most important
in the teacher preparation programs is the extent and quality of the day by
n and practice teaching opportunities with a broad range of students of different
. To provide selective placement to enable students to observe and participate
experiences, and to observe optimal administrative, supervisory and diagnos-
ized facility needs to be available.

a facility should include the following:

1. Central Staff

- Educational director of the hearing impaired.
- Evaluation team: social worker, pediatric audiologist, psych
  hearing impaired, vision consultant.
- Parent-infant educators.
- Nursery-kindergarten teachers.
- Full staff of teachers at all levels.
- Teacher aids.
- Curriculum coordinator.
- Media Specialist.
- Vocational coordinator.
- Speech therapist.
- Miscellaneous staff drawn from the public school (with suppleme
  deafness provided): gym instructors, art and music personnel,

2. Local School Districts or Special Education Districts Staff

- Teachers of the hard of hearing would be employed by their loca
- Resource teachers of the hearing impaired at the secondary leve
  specialty such as math, science, English, language, etc.

3. Consultants

- An acoustical engineer is essential for consultant service on a
  installation of equipment
- Other professional consultants as indicated.

IV. EVALUATION AND DIAGNOSTIC CONSIDERATIONS

In order to provide the most nearly complete educational program po
programs should contain special diagnostic and training services.
counseling, communication and language training for parents and chi
in the school program. All children within the Region should have a

rector of the hearing impaired.
m: social worker, pediatric audiologist, psychologist, educator of the
ed, vision consultant.
educators.
garten teachers.
teachers at all levels.

rdinator.
st.
rdinator.
st.
staff drawn from the public school (with supplemental in-service training regarding
ded): gym instructors, art and music personnel, recreation and shop instructors.

istricts or Special Education Districts Staff

e hard of hearing would be employed by their local districts to work at all levels.
ers of the hearing impaired at the secondary level would teach in an area of
as math, science, English, language, etc.

engineer is essential for consultant service on auditory amplification, and
F equipment
onal consultants as indicated.

GNOSTIC CONSIDERATIONS

e the most nearly complete educational program possible for hearing impaired children,
ntain special diagnostic and training services. Programs should contain special
cation and language training for parents and children prior to the child's enrollment
ram. All children within the Region should have access to this service.

Basic to the program is a diagnostic-evaluation process focused on educational impli
ducted by a child-study team. The team should include an educator of the hearing im
chologist, audiologist, social worker, medical and other professional personnel as n
members of the team should be qualified in their own fields with special training an
hearing impaired children. Provisions should be made for utilizing consultants as n
communication with all members of the child-study team is essential for efficient pr
Observation of children,especially young children, should be an integral part of the
process.

V. RESEARCH CONSIDERATIONS

Despite educational developments, the average deaf child and adolescent remain sever
in language and communication. These deficiencies are reflected in an educational r
from two to four years. Revisions in method and curriculum and the development of d
instruments are of major need. There is a dearth of new instructional procedures or
in all areas of communication development. Academic instruction in regular elementa
education has made great strides, yet there is little evidence that these instructio
are being applied or even experimented with in classes for the deaf.

It is believed essential that the following be undertaken:

1. controlled experimentation with and evaluation of new materials and technique
been developed in other programs.
2. the development of original techniques and materials to facilitate acquisitio
3. comprehensive curriculum planning for pre-school, elementary, junior and seni
levels; and
4. close contact with continuing developments in regular education.
5. language learning of deaf children.
6. systematic auditory learning.

Areas of investigation of the effects of deafness and the psycho-social implications
well as urgent. Research regarding psychological aspects, social maturity, attitudes
school and classroom organization; parent-school relationships; administrative and su

c-evaluation process focused on educational implications and con-
team should include an educator of the hearing impaired, a psy-
er, medical and other professional personnel as necessary. All
fied in their own fields with special training and experience with
ons should be made for utilizing consultants as needed. Direct
he child-study team is essential for efficient program development.
young children, should be an integral part of the evaluation

he average deaf child and adolescent remain severely handicapped
se deficiencies are reflected in an educational retardation of
in method and curriculum and the development of diagnostic
re is a dearth of new instructional procedures or new approaches
opment. Academic instruction in regular elementary and secondary
et there is little evidence that these instructional innovations
ted with in classes for the deaf.

ollowing be undertaken:

with and evaluation of new materials and techniques that have
grams.

techniques and materials to facilitate acquisition of knowledge.

anning for pre-school, elementary, junior and senior high school

ng developments in regular education.

ildren.

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cs of deafness and the psycho-social implications are numerous as
psychological aspects, social maturity, attitudes, and adjustment;
arent-school relationships; administrative and supervisory practices;

the teaching-learning process, and conceptual development. They are charac
as contrasted with basic; (2) practical, as distinct from controlled and ex
unsystematic and underdeveloped; (4) retrospective; (5) cross-sectional; an
non-existent in its application in the instructional realm.

It would seem that soundly-based, productive research, both basic and appli
a combination of a strong regional program in cooperation with a university
department to include: a sufficiently large population of deaf children at
well-trained diagnostic, supervisory, and instructional personnel; competen
training program; and the extensive resources of a university with its spec
the deaf and related fields, such as learning disabilities, linguistics, psy
educational psychology and programmed learning.

The purpose of the evaluative and research planning must be related to the c
in which the child with a hearing impairment learns. It must provide eviden
and be useful in the development of an educational program supportive of tha

VI. SCHOOL-FAMILY CONSIDERATIONS

Children, whether handicapped or not, have individual personality difference
his problems according to his own pattern. The ability of a child with impa
successful adjustments will depend to a great extent on his and his family's
capacities. One of the most important factors in framing a child's attitude
attitude of his parents.

It is almost universal that parents experience great fear and anxiety in firs
have a child with a physical, mental or emotional disability. Therefore, it
services to parents of hearing impaired children are vital. By providing ea
parents, many problems will be minimized. Since many parents receive their
personnel who are involved in establishing the diagnosis of hearing impairmen
need for this personnel to counsel with the parents. When it is no longer fe
provide counseling in a medical setting, parents often need help in contactin
community counseling services.

Training can be started in infancy, but the parents must be taught how to hel
proper help can be given to parents early, educational deprivation can be min

process, and conceptual development. They are characterized as being: (1) applied, sic; (2) practical, as distinct from controlled and experimental; (3) sparse, rdeveloped; (4) retrospective; (5) cross-sectional; and (6) descriptive, and almost pplication in the instructional realm.

undly-based, productive research, both basic and applied, would best result from rong regional program in cooperation with a university having a deaf education a sufficiently large population of deaf children at all ages and grade levels; ic, supervisory, and instructional personnel; competent researchers and a research- the extensive resources of a university with its specialists in the education of fields, such as learning disabilities, linguistics, psycholoinguistics, psychology, and programmed learning.

luative and research planning must be related to the determination of the manner h a hearing impairment learns. It must provide evidence of the child's growth evelopment of an educational program supportive of that growth.

ATIONS

icapped or not, have individual personality differences. Each child will meet to his own pattern. The ability of a child with impaired hearing to make will depend to a great extent on his and his family's attitudes about his e most important factors in framing a child's attitude is likely to be the s.

that parents experience great fear and anxiety in first learning that they ysical, mental or emotional disability. Therefore, it is at this point that hearing impaired children are vital. By providing early services to these will be minimized. Since many parents receive their first contact from medical lved in establishing the diagnosis of hearing impairment, there is a definite l to counsel with the parents. When it is no longer feasible or necessary to a medical setting, parents often need help in contacting and making use of other ervices.

d in infancy, but the parents must be taught how to help their child. If the en to parents early, educational deprivation can be minimized.

One of the most important areas where parental help is needed is in the c
between themselves and their child at a very early age. When this is acc
experience of the child is more likely to be effective. When it is not c
make up those lost years. Special instructions for parents, observation
involving children and adults, and video taped sessions are a few suggest

The child does live in a hearing, speaking world and his method of commun
he is not forced into isolation or into association only with other indiv
ments.

VII. LEARNING ACTIVITIES

Children engage in different experiences at various ages. No two childre
and come to the same point of exhibiting interest in the same activity at
differences are considered essential in planning educational programs and
way possible. Additional staff, a variety of items to learn about and ex
allows individuals to work by themselves or in different size groups are
the developmental needs of each child.

Piaget has done extensive research in this field and offers the following
of development. Notice he provides age ranges and suggests that expectati
developmental patterns may be within a time/growth span. The developmenta
generally follow an orderly pattern.

Sensimotor - Preverbal Intelligence: Coordination of sense impressions an
or fixed ways of responding; Generalized behavior and seeking innovation.

Pre-Conceptual Symbolic - Symbols established to represent his world. Age

Intuitive Thinking - Objects and acts are seen as functions of the ego and
years to 8 years.

Concrete Operations - The ability to give thought to objects and acts whil
symbols that represent these objects. Age - 8 years to 11 years.

re parental help is needed is in the development of communication
at a very early age. When this is accomplished, the educational
ely to be effective. When it is not done, it is very difficult to
instructions for parents, observation of teaching situations
video taped sessions are a few suggested methods.

peaking world and his method of communication should be such that
into association only with other individuals with hearing impair-

ences at various ages. No two children will grow at the same rate
iting interest in the same activity at the same time. Individual
l in planning educational programs and should be supported in every
variety of items to learn about and experiment with and space that
elves or in different size groups are essential in providing for
ld.

n this field and offers the following generally held categories
age ranges and suggests that expectations for specific
a time/growth span. The developmental process of children does

Coordination of sense impressions and movements; Habit formation
ized behavior and seeking innovation. Age - 0 months to 3 years.

tablished to represent his world. Age - 3 years to 5 years.

s are seen as functions of the ego and are subjective. Age - 5

give thought to objects and acts while manipulating objects and
. Age - 8 years to 11 years.

The activities generally associated with these categories are suggested her
the specification of school facilities and not as a program curriculum. It
this is not a complete list, but must be added to according to the needs of

Pre-School

Educational objectives:

Stimulating communication
Capitalizing on residual hearing
Increasing attention span
Increasing auditory discrimination
Assisting children to organize interests toward purposeful behavior
Enhancing the process of observation and discovery
Increasing the rate of concept development
Increasing and developing comprehension
Increasing knowledge
Equipping the child to more effectively functioning within his envi

These objectives may be translated into the following functions and activiti

Function	Activities
Socialization	Play including running, jumping, climbing, game
Motor development	Cutting, pasting, threading, constructing, painting
Auditory and Visual Development	Auditory discrimination, listening and matching speech patterning activities with real objects pictures.
Concept formation	Identification, recall, transfer of one task to another, recognition of similarities and differ color, shape, size, dimensionality, space relationships, directionability.
Communication Skill Development	Conditioning responses to sounds and sights.
Self Expression	Play acting, dress up, gym, rhythm, art.

ssociated with these categories are suggested here to provide a framework for
l facilities and not as a program curriculum. It should also be noted that
t, but must be added to according to the needs of an individual child.

:

ication
sidual hearing
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y discrimination
to organize interests toward purposeful behavior
ess of observation and discovery
e of concept development
eloping comprehension
ge
d to more effectively functioning within his environment

nslated into the following functions and activities:

Activities	Group Size
Play including running, jumping, climbing, games	Small (6-8 children)
Cutting, pasting, threading, constructing, painting	Individual
Auditory discrimination, listening and matching speech patterning activities with real objects or pictures.	Individual or small group
Identification, recall, transfer of one task to another, recognition of similarities and differences color, shape, size, dimensionality, space relationships, directionability.	Individual or small group
Conditioning responses to sounds and sights.	Individual or small group
Play acting, dress up, gym, rhythm, art.	Individual or small group.

Primary

Educational objectives:

Stimulating communication
Capitalizing on residual hearing
Increasing attention span
Increasing auditory discrimination
Assisting children to organize interests toward purposeful beha
Enhancing the process of observation and discovery
Increasing concept development
Increasing comprehension
Developing basic skills of communication
Increasing knowledge
Equipping the child to more effectively functioning within his

These objectives may be translated into the following functions and act

Function	Activities
Socialization	Play and work activities; organized play g rhythms, committee endeavors or building, painting
Motor development	Puzzles, drawing, constructing
Auditory and Visual Development	Listening to records and tape recordings, ing film and filmstrips, relating to sound sight out of doors in other areas.
Concept formation	Discrimination, use of printed materials, relationships
Communication Skill Development	Developing speech patterns, writing, numbe reading.
Self Expression	Play acting, dress up, gym, rhythm, art

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f observation and discovery
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of communication

nore effectively functioning within his environment

ed into the following functions and activities

Activities	Group Size
y and work activities; organized play games, thms, committee endeavors or building, nting	Small group or large group (6-8 or 12-18 children)
zles, drawing, constructing	Individual or small group
tening to records and tape recordings, view- film and filmstrips, relating to sound and ht out of doors in other areas.	Individual or small group
crimination, use of printed materials, number ationships	Individual or small group
eloping speech patterns, writing, numbers, ding.	Individual or small group
y acting, dress up, gym, rhythm, art	Individual or small group

Intermediate

Educational Objectives:

Increasing knowledge
Enlarging communication
Capitalizing on residual hearing
Increasing attention span
Improving auditory discrimination
Increasing observation
Enlarging concepts
Increasing comprehension
Improving communication skills
Exploring pre-vocational interests
Stimulating creativity
Enlarging recreational skills
Providing opportunity for self government
Equipping the child to more effectively function within his environme

These objectives may be translated into the following functions and activities

Function	Activities
Socialization	Committee planning, decorating areas, group affairs, dances, clubs, organizations.
Motor Development	Work with a variety of media, equipment, tools, physical activities, gym, swimming.
Auditory and Visual Development	Listening to records and tape recordings, using films and filmstrips, video tape, producing auditory and visual materials.
Concept formation	Use of a variety of printed materials both visual and auditory.
Communication Skill Development	Language development, story form, number use, science facts, and speech training.
Self Expression	Play acting, gym, art, rhythm, self government.

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e effectively function within his environment

into the following functions and activities:

	Activities	Group Size
	tee planning, decorating areas, group rs, dances, clubs, organizations.	Small group or large group
	with a variety of media, equipment, tools, cal activities, gym, swimming.	Individual, small group or large group
	ing to records and tape recordings, using and filmstrips, video tape, producing ry and visual materials.	Individual, small group or large group
	a variety of printed materials both and auditory.	Individual or small group
	ge development, story form, number cience facts, and speech training.	Individual or small group
	cting, gym, art, rhythm, self government.	Individual or small group

VIII. ORGANIZATION CONSIDERATIONS

To facilitate the development of each facet of the regional programm
statement should be made although the final refinement of this must
in each region responsible for the development of the regional plan.
in summary of the preceding sections of this document.

The following sections are quoted directly from the Illinois Commiss
Hearing Impaired Children in Illinois, to establish the premise for

> Regulatory and coordinating functions should be supplied for
> through a professionally qualified staff in the Office of th
> of Public Instruction. In addition, there must be establish
> State an Advisory Council for the Education of Hearing Impai
> nating and development responsibilities. This would develop
> between the Office of the Superintendent of Public Instructi
> local programs and other State Departments which have some a
> ponsibility for education of hearing impaired, such as the D
> and Family Services (School for the Deaf) and the Department
> (hearing impaired children in their institutions). This Cou
> the heads of all regional and State school programs for the
> the State, professionally qualified personnel in the ancilla
> psychology and audiology, and such other professionally qual
> might seem desirable. This Council should advise the Departm
> of new programs, standards for programs, certification requi
> and all other pertinent matters.
>
> Coordination of the Regional Programs on a statewide basis wi
> services of other State agencies dealing with hearing handica
> be effected by regular action of the Advisory Council for the
> Hearing Impaired.
>
> The proposed system should result in coordinated programs for
> throughout the State of Illinois. The regional schools, the
> schools of Chicago would be able to provide a sound education

of each facet of the regional programming, a design or problem solving
ugh the final refinement of this must come from the individuals and groups
the development of the regional plan. A tentative structure is offered
ctions of this document.

ted directly from the Illinois Commissions' A Comprehensive Plan for
Illinois, to establish the premise for the proposed regional design to follow.

ating functions should be supplied for the entire State
ly qualified staff in the Office of the Superintendent
In addition, there must be established within the
cil for the Education of Hearing Impaired with coordi-
responsibilities. This would develop greater coordination
the Superintendent of Public Instruction, Regional and
er State Departments which have some administrative res-
ion of hearing impaired, such as the Department of Children
chool for the Deaf) and the Department of Mental Health
dren in their institutions). This Council should include
nal and State school programs for the hearing impaired in
lly qualified personnel in the ancillary services such as
gy, and such other professionally qualified personnel as
This Council should advise the Departments on establishment
ards for programs, certification requirements for personnel,
t matters.

gional Programs on a statewide basis with programs and
e agencies dealing with hearing handicapped children should
action of the Advisory Council for the Education of the

ould result in coordinated programs for hearing impaired children
f Illinois. The regional schools, the State school, and the
ld be able to provide a sound educational program with appropriate

ancillary services for these children from the time of identification of hearing handicaps through academic and vocational programs. The staff in the Office of the Superintendent of Public Instruction and the Advisory Council for the Education of the Hearing Impaired should insure high educational standards in all of the programs and provide the necessary flexibility for transferring children from one program to another whenever necessary.

Direction toward an organized regional plan began in 1964 with the establishment of a minimum size for programs or a plan for achieving it as set forth in the Special Education Rules and Regulations for approved reimbursable programs. These minimal standards are as follows:

Rule 3.08 - Programs for deaf children shall have a minimum of six classes at the elementary level in addition to a preschool class.

Rule 3.09 - Programs for deaf children having less than the minimum number of classes will be approved for reimbursement only if these classes are part of a comprehensive, long-range developmental plan which has been approved by the Division of Special Education.

In 1969, HB 1407 made mandatory the education of handicapped children, thus requiring school districts to participate in regional planning for the hearing impaired child.

Regional planning committees developed in most regions through action of the local directors of special education with support from parents who are now determined to have good educational programs for their children on a statewide basis.

The Illinois Commission report directed attention to the critical needs of hearing impaired children and gave further leverage toward coordinated regional programs. Among the recommendations of the Commission Study are those items pertinent to this document which are quoted below:

Comprehensive educational programs should be developed on a regional basis. The complexity of the educational problem demands that specialized equipment as well as special facilities be provided.

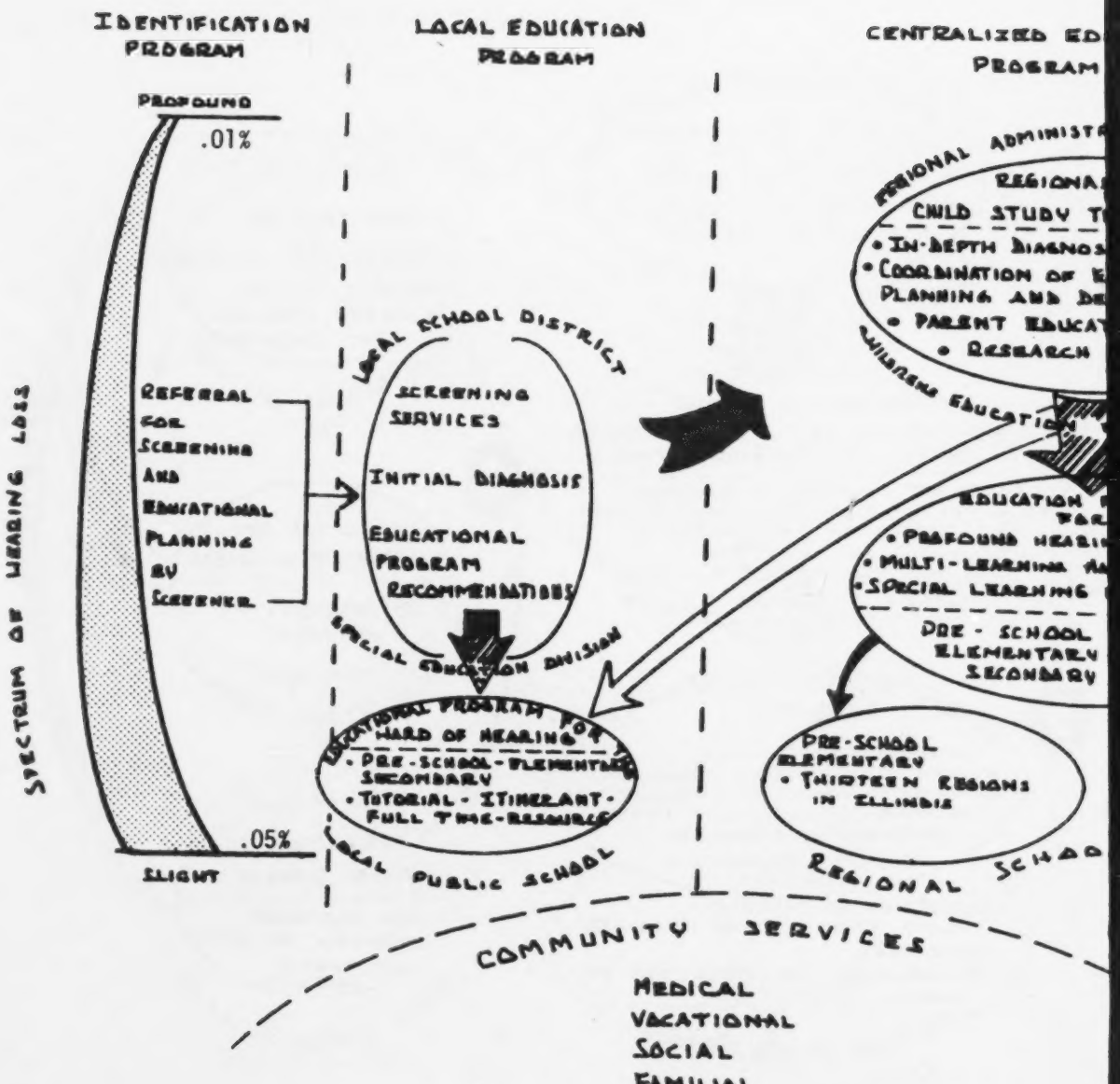
A spectrum of services should be provided ranging through specialized centers, special rooms, itinerant and tutorial programs in order to meet the needs of every child.

Each regional program should develop special diagnostic and training service to provide special counseling for parents and communication and language training prior to the child's enrollment in the school program.

Since programs for the hearing impaired are more costly than most special education, increased financial support is essential. The Office of the Superintendent of Public Instruction should devise a program for increased State support for approved hearing impaired programs.

With the above providing an overall plan, each region is now developing along guidelines that allow for specific regional needs to be met. It is proposed that the services provided at the regional level be coordinated by the Advisory Council composed of the Directors of Special Education from each of the cooperating special education districts within the regional district. Services provided by State and local agencies would give support in an integrated plan set forth by the Advisory Council. The overall administrative functions would be carried out by the office of one of the local superintendents. The actual administration of the regional center for diagnostic and evaluative work and the educational program would be the responsibility of the regional Director.

The local school district would maintain programs for their hard of hearing children, but the deaf child would be educated in the regional educational center. All children within the region would have access to the Children's Educational Evaluation Center for diagnosis and evaluation of their educational and physical needs. Diagram I represents this schematically. Diagram II specifically illustrates the inter-relatedness of the regional services from referral to placement and educational program.


IDENTIFICATION PROGRAM
LOCAL EDUCATION PROGRAM
CENTRALIZED ED
PROGRAM
PROFOUND
.01%
SPECTRUM OF HEARING LOSS
REFERRAL FOR SCREENING AND EDUCATIONAL PLANNING BY SCREENER
LOCAL SCHOOL DISTRICT
SCREENING SERVICES
INITIAL DIAGNOSIS
EDUCATIONAL PROGRAM RECOMMENDATIONS
SPECIAL EDUCATION DIVISION
HARD OF HEARING
• PRE-SCHOOL-ELEMENTARY SECONDARY
• TUTORIAL - ITINERANT - FULL TIME-RESOURCE
.05%
SLIGHT
LOCAL PUBLIC SCHOOL
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REGIONA
CHILD STUDY T
• IN-DEPTH DIAGNOS
• COORDINATION OF E
PLANNING AND DE
• PARENT EDUCAT
• RESEARCH
CHILDREN'S EDUCATION
EDUCATION
FOR
• PROFOUND HEARI
• MULTI-LEARNING
• SPECIAL LEARNING
PRE - SCHOOL
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PRE-SCHOOL
ELEMENTARY
• THIRTEEN REGIONS IN ILLINOIS
REGIONAL SCHOO
COMMUNITY SERVICES
MEDICAL
VOCATIONAL
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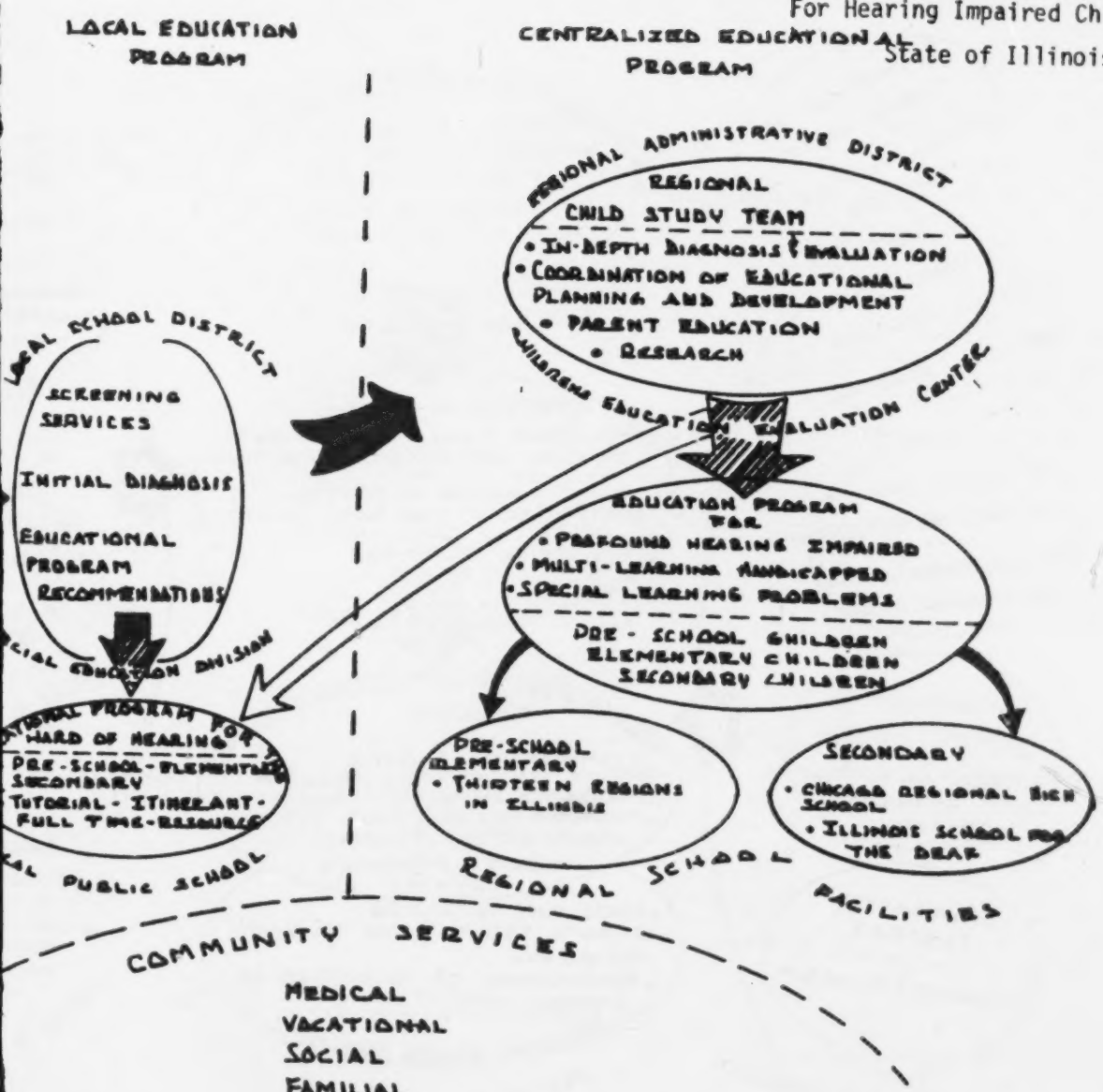
FAMILIAL

DIAGRAM I
Regional Organizational Plan
For Hearing Impaired Children
State of Illinois



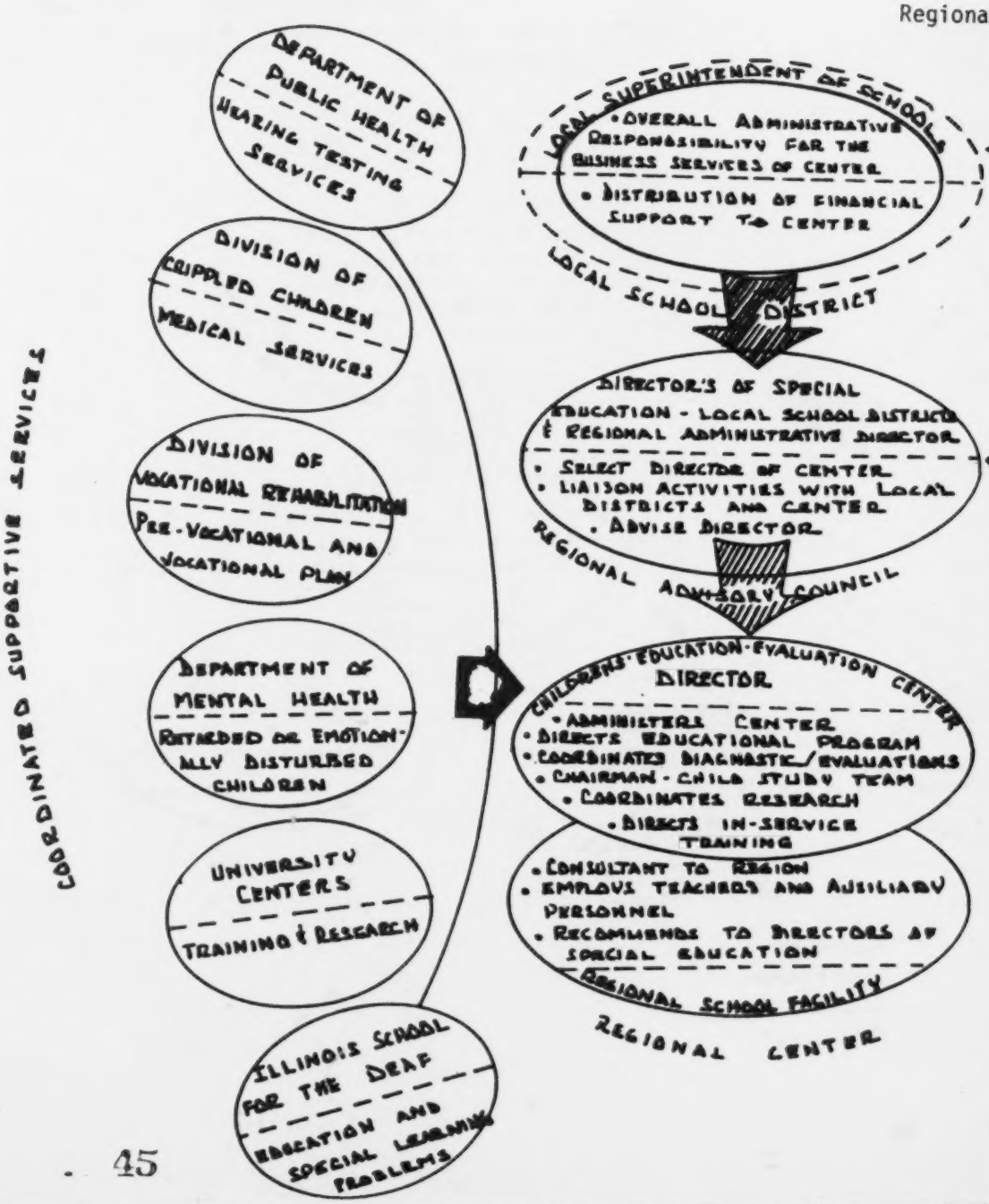
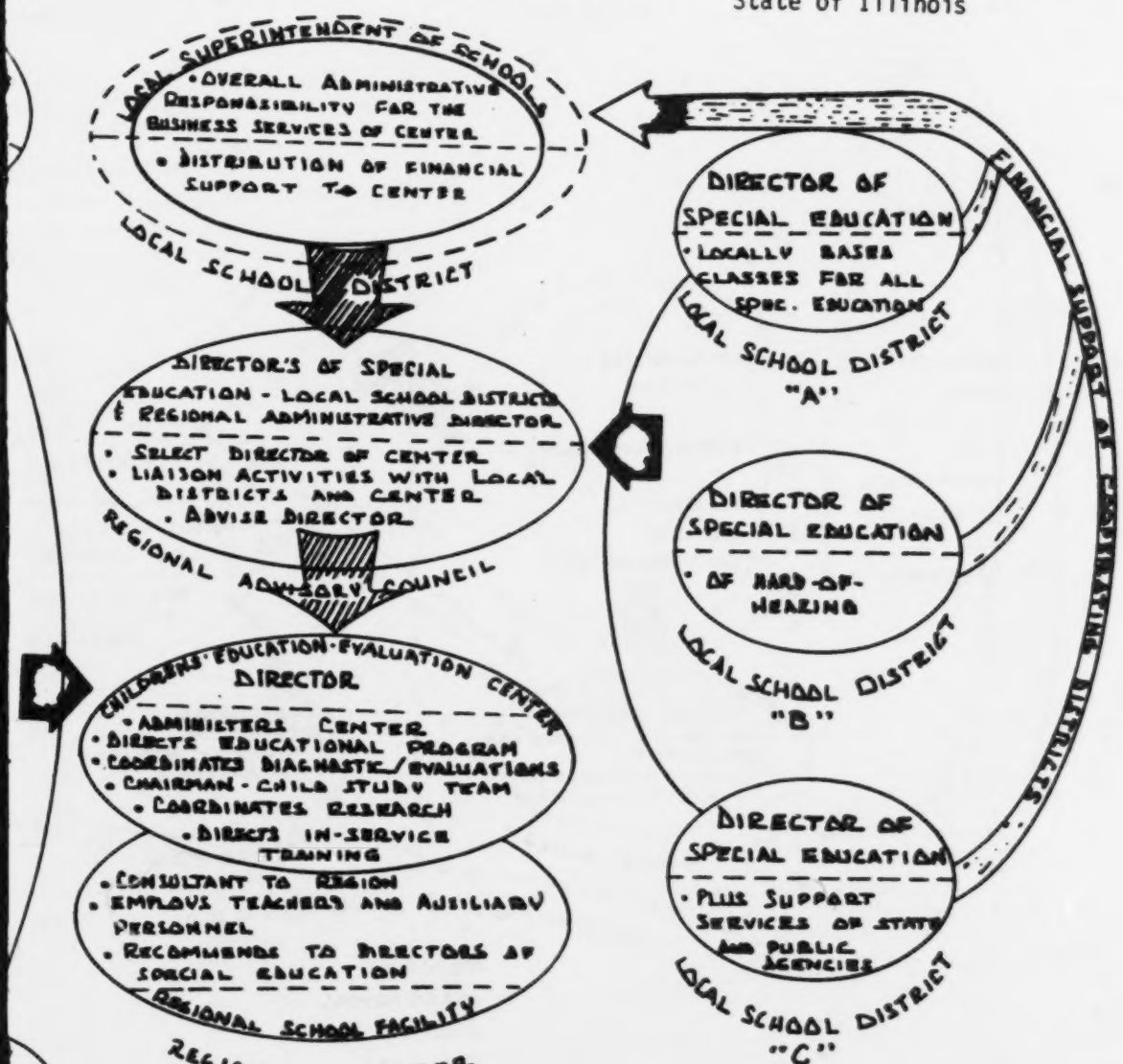

COORDINATED SUPPORTIVE SERVICES
DEPARTMENT OF PUBLIC HEALTH
HEARING TESTING SERVICES
DIVISION OF CRIPPLED CHILDREN
MEDICAL SERVICES
DIVISION OF VOCATIONAL REHABILITATION
PRE-VOCATIONAL AND VOCATIONAL PLAN
DEPARTMENT OF MENTAL HEALTH
RETARDED OR EMOTIONALLY DISTURBED CHILDREN
UNIVERSITY CENTERS
TRAINING & RESEARCH
ILLINOIS SCHOOL FOR THE DEAF
EDUCATION AND SPECIAL LEARNING PROBLEMS
LOCAL SUPERINTENDENT OF SCHOOLS
• OVERALL ADMINISTRATIVE RESPONSIBILITY FOR THE BUSINESS SERVICES OF CENTER
• DISTRIBUTION OF FINANCIAL SUPPORT TO CENTER
LOCAL SCHOOL DISTRICT
DIRECTOR'S OF SPECIAL EDUCATION - LOCAL SCHOOL DISTRICTS & REGIONAL ADMINISTRATIVE DIRECTOR
• SELECT DIRECTOR OF CENTER
• LIAISON ACTIVITIES WITH LOCAL DISTRICTS AND CENTER
• ADVISE DIRECTOR
REGIONAL ADVISORY COUNCIL
CHILDRENS EDUCATION EVALUATION CENTER DIRECTOR
• ADMINISTERS CENTER
• DIRECTS EDUCATIONAL PROGRAM
• COORDINATES DIAGNOSTIC/EVALUATIONS
• CHAIRMAN - CHILD STUDY TEAM
• COORDINATES RESEARCH
• DIRECTS IN-SERVICE TRAINING
• CONSULTANT TO REGION
• EMPLOYS TEACHERS AND AUXILIARY PERSONNEL
• RECOMMENDS TO DIRECTORS OF SPECIAL EDUCATION
REGIONAL SCHOOL FACILITY
REGIONAL CENTER

DIAGRAM II
Organizational Plan for Administration
of
Regional Diagnostic and Educational Center
State of Illinois


LOCAL SUPERINTENDENT OF SCHOOLS
• OVERALL ADMINISTRATIVE RESPONSIBILITY FOR THE BUSINESS SERVICES OF CENTER
• DISTRIBUTION OF FINANCIAL SUPPORT TO CENTER
LOCAL SCHOOL DISTRICT
DIRECTOR'S OF SPECIAL EDUCATION - LOCAL SCHOOL DISTRICTS & REGIONAL ADMINISTRATIVE DIRECTOR
• SELECT DIRECTOR OF CENTER
• LIAISON ACTIVITIES WITH LOCAL DISTRICTS AND CENTER
• ADVISE DIRECTOR
REGIONAL ADVISORY COUNCIL
CHILDRENS' EDUCATION-EVALUATION CENTER
DIRECTOR
• ADMINISTERS CENTER
• DIRECTS EDUCATIONAL PROGRAM
• COORDINATES DIAGNASTIC/EVALUATIONS
• CHAIRMAN - CHILD STUDY TEAM
• COORDINATES RESEARCH
• DIRECTS IN-SERVICE TRAINING
• CONSULTANT TO REGION
• EMPLOYS TEACHERS AND AUXILIARY PERSONNEL
• RECOMMENDS TO DIRECTORS OF SPECIAL EDUCATION
REGIONAL SCHOOL FACILITY
REGIONAL CENTER
DIRECTOR OF SPECIAL EDUCATION
• LOCALLY BASED CLASSES FOR ALL SPEC. EDUCATION
LOCAL SCHOOL DISTRICT "A"
DIRECTOR OF SPECIAL EDUCATION
• OF HARD-OF-HEARING
LOCAL SCHOOL DISTRICT "B"
DIRECTOR OF SPECIAL EDUCATION
• PLUS SUPPORT SERVICES OF STATE AND PUBLIC AGENCIES
LOCAL SCHOOL DISTRICT "C"
FINANCIAL SUPPORT AT STATE LEVEL

The State Department has now activated a Committee to study administration and the financing of these regional programs. It is recognized that some building program will be necessary if the regional plan is to be fully realized. This may be developed in a three phase program:

Phase I - A functional regional administrative framework on a multi-county basis.

Phase II - Employment of the Coordinator and the establishment of an evaluation center or service to determine the incidence as well as the needs of the children in the area.

Phase III - Area funding for the development of a centralized educational facility with instructional media and equipment center.

IMPLICATIONS FOR REGIONAL FACILITIES

Since each child has varying potentials for learning, a spectrum of services shou
requires specialized educational and diagnostic facilities, effective instruction
in order to meet the needs of every child. In addition to the program in a specia
classes for children with moderate to mild hearing losses are necessary along wit
for infant and parent education.

Facilities should be planned to utilize to the fullest extent possible existing sp
common use areas such as gyms, lunch rooms, auditoriums, etc. However, the specia
program for hearing impaired children makes equipment and facility details essenti
tional areas for hearing children. Auditory and visual features for safety of the
and diagnostic areas, media resources for children and teachers, and other specifi

GENERAL SPECIFICATIONS

INSTRUCTION OF THE HEARING IMPAIRED

Deaf education, like that of hearing education, has taken the position that greate
the learning process by the student must occur if he is to function successfully.
opportunities for individualized instruction at the pre-school, elementary and sec
available. The facility design should allow for regrouping of students from class
study to tutorial assistance. Areas for medium size group activity and assembly sh
bility of being restructured to meet new demands of the educational program.

FACILITY IMPLICATIONS

Instructional areas should have a building system designed that will allow new spac
Space should be easily divisible. Interior space utilization and designs should in
movable cabinets, flexible lighting systems, heating/ventilating and plumbing syste
should have complete audio/video capacity and flexibility for movement. Group stud
control should be designed adjacent to larger play/work areas. Small conference ar
as a part of the group study area to accommodate individual children. Attention mu
the school to acoustic and visual features.

IMPLICATIONS FOR REGIONAL FACILITIES

ng potentials for learning, a spectrum of services should be proceded. This
tional and diagnostic facilities, effective instruction, and tutorial programs
of every child. In addition to the program in a specialized center, special
moderate to mild hearing losses are necessary along with a pre-school program
ation.

ed to utilize to the fullest extent possible existing space that provides
yms, lunch rooms, auditoriums, etc. However, the specialty of the educational
ed children makes equipment and facility details essentially unique from instruc-
hildren. Auditory and visual features for safety of the children, evaluation
a resources for children and teachers, and other specific facilities.

GENERAL SPECIFICATIONS

IMPAIRED

f hearing education, has taken the position that greater self-determination in
student must occur if he is to function successfully. To accomplish this,
lized instruction at the pre-school, elementary and secondary level must be
sign should allow for regrouping of students from class study to individual
e. Areas for medium size group activity and assembly should have the capa-
d to meet new demands of the educational program.

have a building system designed that will allow new space configurations.
sible. Interior space utilization and designs should include and accommodate
lighting systems, heating/ventilating and plumbing systems. Study carrels
video capacity and flexibility for movement. Group study areas with acoustical
adjacent to larger play/work areas. Small conference areas should be designed
y area to accommodate individual children. Attention must be given throughout
visual features.

PROGRAM RESEARCH AND EXPLORATION

All children will receive instruction according to their ability to: (1) under
As a part of the educational process, learning concepts can contribute to langu
concepts may occur in situations associated with the manipulation of items nece
of a physical task.

Methods of improving instruction, the learning skill process and concept develo
children can result as a part of research in manipulative and learning associat

FACILITY IMPLICATIONS

An Exploration Center for Research should be designed to provide students an op
of interests. Research planning should be developed jointly within the Childre
Center staffed with professional researchers and instructional teams in the ECR

Fixed TV cameras with remote control capacity plus movable cameras should be pr
video recorder/playback units.

Office space for members of a child-study team should be provided as well as co

USE OF COMMON FACILITIES

The majority of hearing impaired children can use various school facilities orig
children, such as physical education, library and multi-media, auditorium, stude
facilities. All areas mentioned, except physical education and lunchroom, shoul
allowing use at any time by any child. Lunchrooms should be designed to handle
plus one-fourth of the hearing impaired children in a building at the same time.
areas should be programmed one period a day for complete use by hearing impaired
groups of children the remainder of the day. Block time use of specialized area
day for use by hearing impaired children.

FACILITY IMPLICATIONS

Educational facilities for hearing impaired children should be related as closel
the other children. Access to the gymnasium, library and multi-media area shoul
in all areas.

ION

truction according to their ability to: (1) understand and (2) communicate.
process, learning concepts can contribute to language development. Building
ns associated with the manipulation of items necessary for the completion

on, the learning skill process and concept development for hearing impaired
of research in manipulative and learning associated experiences.

arch should be designed to provide students an opportunity to explore a variety
ng should be developed jointly within the Children's Educational Evaluation
al researchers and instructional teams in the ECR.

ontrol capacity plus movable cameras should be programmed for this space with

child-study team should be provided as well as conference areas.

ed children can use various school facilities originally designed for hearing
cation, library and multi-media, auditorium, student activity and lunchroom
ed, except physical education and lunchroom, should be non-programmed (unscheduled),
child. Lunchrooms should be designed to handle one-half the hearing population
impaired children in a building at the same time. The physical education
period a day for complete use by hearing impaired children and for use by small
r of the day. Block time use of specialized areas should be available every
children.

ing impaired children should be related as closely to the common areas serving
the gymnasium, library and multi-media area should be direct for all children

RESIDENTIAL FACILITIES

A five day residential plan for children whose home is too far for daily transpor
Children would remain "in" during the week and go home on the weekends.

FACILITY IMPLICATIONS

A residential or boarding facility should be provided. This may take the form of
or rented by the regional educational unit and staffed by adults, university stud

INSTRUCTION OF HEARING IMPAIRED CHILD WITH SECONDARY LEARNING PROBLEM

Children with hearing impairments and other learning disorders have special facil
in their learning capabilities and instructional activities. Planning for these
general guidelines:

Secondary Disorder	General Program and Facility Co
Educable Mentally Handicapped	Study in self-contained classro Participation in activity-study Integrated with hearing childre community contacts.
Trainable Mentally Handicapped	Study in self-contained classro Participation in activity-study Integrated with EMH deaf and re wherever possible.
Orthopedically Handicapped	Integrated with regular deaf an some academic study. Participation in activity-study
Partially Sighted	Integrated in regular deaf class education, with hearing for so Participation in activity-study

*Activity-study: Participation in social development experiences in groups. Soci
can include play, music, rhythms, films, etc. Study experiences include cognitiv
or with class group.

children whose home is too far for daily transportation may be necessary.
ng the week and go home on the weekends.

ity should be provided. This may take the form of cottages either built
tional unit and staffed by adults, university students or other personnel.

CHILD WITH SECONDARY LEARNING PROBLEM

ts and other learning disorders have special facility requirements based
and instructional activities. Planning for these children should follow these

General Program and Facility Considerations

Study in self-contained classroom.
Participation in activity-study program.*
Integrated with hearing children for physical education,
community contacts.

Study in self-contained classroom.
Participation in activity-study program.
Integrated with EMH deaf and regular deaf, with hearing children
wherever possible.

Integrated with regular deaf and hearing for physical education,
some academic study.
Participation in activity-study program.

Integrated in regular deaf classes, with hearing in physical
education, with hearing for some academic study.
Participation in activity-study program.

in social development experiences in groups. Social development activities
, films, etc. Study experiences include cognitive development individually

Secondary Disorder	General Program and Fa
Mildly Emotionally Disturbed	Require quiet study a Integrated in regular physical education. Participation in activ
Mildly Perceptually Handicapped	Integrated in regular physical education, Participation in activ

FACILITY SPECIAL CONSIDERATIONS

DOORS

Exterior door openings, as well as many of the interior doors to ins
should be wide enough to accommodate wheelchairs.

RAMPWAYS

Wherever possible, rampways should be utilized to connect different
building is multi-storied, an elevator should be installed which wou
pedically handicapped students.

TOILETS AND SHOWERS

Some toilets should be equipped with pull-bars. Showers in the gym s

ALARM SYSTEM

Fire alarm and disaster alarm system should be equipped with visual s

ILLUMINATION

Proper lighting is a part of safety. Its importance as a principle o
emphasized. Highest standards of lighting are needed to ease the tas
highest levels of performance.

order	General Program and Facility Considerations
y Disturbed	Require quiet study area. Integrated in regular deaf classes, with hearing in physical education. Participation in activity-study program.
ly Handicapped	Integrated in regular deaf classes, with hearing in physical education, with hearing for some academic. Participation in activity-study program.

CONSIDERATIONS

openings, as well as many of the interior doors to instructional areas and toilets, enough to accommodate wheelchairs.

ble, rampways should be utilized to connect different levels of the building. If a lti-storied, an elevator should be installed which would be available to the ortho- icapped students.

S

hould be equipped with pull-bars. Showers in the gym should have pull-bars.

disaster alarm system should be equipped with visual signaling devices

g is a part of safety. Its importance as a principle of planning cannot be over- ghest standards of lighting are needed to ease the task of seeing and to maintain the of performance.

VIDEO SYSTEM - DIAL RETRIEVAL SYSTEM

The facility should be equipped for closed circuit TV monitors in each instructional area. Some of these should be remote-controlled TV cameras.

To accommodate the likelihood of data retrieval, each instructional area should be equipped with a dial access unit. Visual signals should be installed in each instructional area to indicate an intercommunications announcement or a telephone call.

ARCHITECTURAL CONSIDERATIONS

The school of the future must, like the processes it houses, permit chang
in response to modifications in the educational program. A facility for
these qualities; adaptability, flexibility, and rearrangeability of inter
tions. Much of this can be planned in the initial structure through the
utility components. Fixed, or permanent walls are not prerequisites of a
portable walls and folding walls can allow greater flexibility within spa
sound control where essential. Soft floor coverings, acoustically planne
provide the necessary sound attenuation qualities required. Moveable fur
for fluidity in space.

Physically separated areas of the facility must receive special design co
groups of children may move freely among the areas without the use of exte

Color and finishes of walls, ceilings, furniture and equipment should be d
free environment.

The demand for spaces created by the educational program yields certain im
facility. A number of these characteristics will apply to all aspects of
in the design of any portion of the facility and of the facility as an ent

Specific architectural considerations are described in this chapter to ass
design requirements to the educational program design.

IS

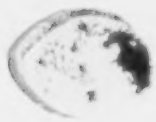
ist, like the processes it houses, permit change of interior spaces
s in the educational program. A facility for hearing impaired children must have
ty, flexibility, and rearrangeability of interior spaces to accommodate modifica-
planned in the initial structure through the use of systems for wall, floor and
or permanent walls are not prerequisites of a modern, well planned school facility;
walls can allow greater flexibility within spaces while at the same time provide
al. Soft floor coverings, acoustically planned ceilings and wall surfaces will
attenuation qualities required. Moveable furniture and other fixtures will allow

of the facility must receive special design consideration so that individuals or
freely among the areas without the use of extensive corridors.

, ceilings, furniture and equipment should be designed to provide aesthetic glare-

ed by the educational program yields certain implications for the design of a new
characteristics will apply to all aspects of the building and must be kept in mind
of the facility and of the facility as an entity.

derations are described in this chapter to assist in relating the overall facility
ducational program design.



The considerations are categorized in five areas for convenience and ease of arc
Each space, later described, will refer to the architectural considerations cont
Exceptions to the statements where appropriate will be noted by space.

CATEGORIES

I	II	III	IV
STRUCTURE	ENVIRONMENT	EQUIPMENT	MEDIA
Ceiling	Thermal	Surfaces	Amplification
Wall	Acoustical	Student Stations	TV
Window	Spatial	Teacher Stations	CAI/CBI
Floor	Aesthetic	Storage	A/V
Other	Other	Other	CON/TLM
			RAS
			Other

CATEGORY I - STRUCTURE

Ceiling

Ceiling heights should be approximately 9'6 to 10' and acoustically treated to ac
specified in each space. All participants in each area should be able to hear th
them without interference from other areas.

zed in five areas for convenience and ease of architectural development.
ll refer to the architectural considerations contained in these categories.
ere appropriate will be noted by space.

CATEGORIES

III	IV	V
EQUIPMENT	MEDIA	UTILITIES
Surfaces	Amplification	Electrical
Student Stations	TV	Plumbing
Teacher Stations	CAI/CBI	Mechanical
Storage	A/V	Other
Other	CON/TLM	
	RAS	
	Other	

CATEGORY I - STRUCTURE

imately 9'6 to 10' and acoustically treated to accommodate the activities
rticipants in each area should be able to hear those sounds directed to
ther areas.

Walls

Wherever possible, walls should be designed to serve as display areas utilizing pi
wall units. Portable chalkboards, tackboards, and casework can define areas as te
for some individual or small group instruction.

Interior walls are generally classified under two categories: long-term adaptabil
flexibility.

Long-term adaptability means the utilization of longer spans of non-load bearing i
the utilities located in the floor or ceiling instead of in the walls, or by other
features that make it possible to change interior arrangements over a weekend or du

Short-term flexibility specifies that two or more teaching stations may be combine
by the use of a movable partition or furniture so that groups of various sizes can
partitions must have effective sound attenuation level of 48 or better.

Windows

The amount and location of windows in schools is a subject of considerable controve
that large window areas significantly increase the problems of heating, cooling, gl
aesthetic possibilities, availability of wall space for display space, and many oth
The disadvantages of expanses of windows are well known to school personnel, and th

should be designed to serve as display areas utilizing pin wall and write-on
alkboards, tackboards, and casework can define areas as teaching nooks or corners
mall group instruction.

ally classified under two categories: long-term adaptability and short-term

eans the utilization of longer spans of non-load bearing interior walls with
the floor or ceiling instead of in the walls, or by other similar construction
ssible to change interior arrangements over a weekend or during vacation periods.

ecifies that two or more teaching stations may be combined or divided at once
artition or furniture so that groups of various sizes can be accommodated. Such
ctive sound attenuation level of 48 or better.

f windows in schools is a subject of considerable controversy. It is well known
ignificantly increase the problems of heating, cooling, glare, maintenance,
availability of wall space for display space, and many other considerations.
nses of windows are well known to school personnel, and the improvements in

artificial lighting to avoid eye-strain have led to the conclusion that windows are not a completely satisfactory source of light for the visual tasks of children in the classroom.

The use of windows should be significantly reduced although not completely eliminated. Fixed sash should be utilized throughout. The importance of simple room darkening in every classroom to easily utilize visual aids implies the use of low transmission glass in all windows. This arrangement allows the occupants to view the outside, but results in rooms dark enough for the showing of films when artificial lighting has been turned off. Some spaces such as counseling offices, conference rooms, administrative offices, reading rooms, and other spaces designed primarily for informal activities might contain additional windows.

Floor

Floors should be covered with an easily maintained, durable covering that does not induce allergies. The covering should contribute to sound control and at the same time provide a comfortable work surface. Wall-to-wall carpeting may meet these requirements in most instances. Unless otherwise specified, all instructional areas, offices and common facilities will be carpeted. Exceptions to this will occur in art, science, physical education areas and where the use of water is specified.

Technological development has introduced an induction power source system dimension to space utilization and flexibility. The induction power source concept involves the placement of the primary electrical source in the floor and the placement of the secondary source in the machine. Informed sources state that this concept is both technologically and economically feasible for structural implementation. The number of electric and electronic outlets and necessary conduit may be materially reduced by this system.

Electronic Carpet

A new concept in carpeting that carries both electric current and electronic signals is expected to be available for purchase in late 1970 or early 1971. The advent of this material will provide an extension of space flexibility within any enclosed space.

Other

Openings, both internal and external should be designed wide enough to permit the easy passage of orthopedically handicapped children. Door openings to enclosed areas should be recessed to avoid opening directly into traffic.

CATEGORY II - ENVIRONMENT

Thermal

It is common knowledge that too cold a temperature can cause distraction and discomfort, and too warm a temperature can cause inattention and drowsiness. Regardless of outside temperature, the internal temperature should always be comfortable 12 months of the year. The relative humidity should always be satisfactory for both the health and the comfort of the occupants as well as for the preservation of the stored materials. The building should be free from odor and dust.

Since perimeter wall areas do have valuable educational uses, especially for shelving, carrels, and tables, heating and air return units should be carefully located. Zone control is suggested to ensure that the temperature within is appropriate for the activities occurring there. The mechanical system should be flexible enough to permit easy rearrangement of the spaces.

Acoustical

The adverse effect of noise on the learning environment has resulted in its control as an important characteristic of good design. This objective can be reached by using materials which control noise at the point of origin by isolating the source of the noise, and by absorbing or damping the noise after it has been generated.

The installation of carpeting has proven to be effective in eliminating a considerable amount of noise when installed in general classrooms, offices, media centers, and individual and group study spaces. Some teachers also report that the conduct of children improves and that students are quieter when the floor is carpeted.

Noise from student work stations can be diminished if non-metallic components are used in their construction. By increasing the number of low-level speakers and installing them in a broader distribution pattern, a reduction in the volume of sound from loudspeaker systems that interfere with neighboring classrooms can be achieved. Distracting sounds from music rooms, shops, physical education classes, and other sound-producing areas can be avoided in most cases by locating these classes away from study areas, and quiet locations. Sound-absorptive materials on

walls and ceilings should be utilized. Equipment or machinery that is esp
tained by special enclosures or muffled by the extensive use of sound-abso
possible acoustical treatment for the facility should be designed.

Spatial

The relationships of spaces, one to the other, constitute a significant re
in order to reduce wasted travel time, motion, and space. In the facility
given to proximity grouping by educational level. Large group areas and o
be easily accessible to all levels. Consideration should be given to the
the social and cultural opportunities of students as well as relationships
Where two or more separate buildings are constructed, the necessity for ca
is of even greater significance in order to provide for the best possible
most effective and economical relationship between educational and communi

Aesthetic

The aesthetic qualities of a school building have far-reaching implication
its doors and spend their time there day after day. It is agreed that a s
for the purpose of instruction. Characteristics of beauty are no less impo
it is important that aesthetics be a major consideration in the design. Co
patterns of children and adults; stimulating color needs to be added to are
occur and soothing color to areas used for quiet activities.

Provision for decorative art media such as the mural, mosaic, sculpture, ba
and stained glass windows should be provided for by the architect that will
aesthetic experiences of the children.

Display space for art work, bulletin boards for notices for students and st
art, book displays, demonstrations, examples of industrial arts, science, h
enhance the school program should be included in aesthetic planning.

The landscaping of the outdoor areas and any innercourts should be given sp
in the construction of the facility.

d. Equipment or machinery that is especially noisy should be con-
ed by the extensive use of sound-absorptive materials. The best
facility should be designed.

he other, constitute a significant responsibility of the architect
, motion, and space. In the facility, consideration should be
ional level. Large group areas and other general spaces should
Consideration should be given to the space relationships that affect
of students as well as relationships pertaining to learning areas.
are constructed, the necessity for careful study of relationships
der to provide for the best possible utilization of the site and the
nship between educational and community services.

uilding have far-reaching implications for the children who enter
day after day. It is agreed that a school should be functional
acteristics of beauty are no less important to children; indeed,
major consideration in the design. Color is vital to the behavioral
ulating color needs to be added to areas where stimulating activities
d for quiet activities.

ch as the mural, mosaic, sculpture, bas-relief, fresco, monument,
ovided for by the architect that will provide a dimension to the

oards for notices for students and staff, picture molding for hanging
amples of industrial arts, science, homemaking and other displays that
ncluded in aesthetic planning.

nd any innercourts should be given special consideration and treatment

CATEGORY III - EQUIPMENT

Instructional Surfaces

A place to teach and the tools to assist and enhance the teaching and learning basic elements which must receive top consideration by the school designer.

Chalkboard areas should be provided in quantity necessary for adequate teacher and pupil use, and wherever possible, should be demountable for easy relocatio

Tackwall should be provided, wherever possible, as part of the wall finish per ceiling tack space, thereby eliminating the necessity for any special tackboar

Student Stations

All furnishings, facilities, and display areas should be scaled to the age lev who will utilize each space. APPENDIX B.

Teacher Stations

All faculty and administration offices should be provided with the following m wardrobe, lockable filing cabinets, desk, chair, seating for two, and bookshel

A faculty lounge and eating area should provide a place for the staff to relax of work during the day, and this should be a consideration on virtually every "coffee break" concept is especially important to the teacher.

CATEGORY III - EQUIPMENT

s to assist and enhance the teaching and learning process are the
eive top consideration by the school designer.

ovided in quantity necessary for adequate teacher demonstration
ossible, should be demountable for easy relocation.

wherever possible, as part of the wall finish permitting floor-to-
liminating the necessity for any special tackboard space.

and display areas should be scaled to the age level of the children
APPENDIX B.

n offices should be provided with the following minimum requirements:
inets, desk, chair, seating for two, and bookshelves.

rea should provide a place for the staff to relax away from the pressures
his should be a consideration on virtually every work assignment. The
ecially important to the teacher.

Storage

Materials storage requires a variety of spaces to accommodate the following
storage at each teaching station; education level storage for books and supp
special areas such as physical education equipment, art, industrial art, dra
other special areas.

Custodial work and storage stations should be provided in convenient locatio
Each area should be equipped with required plumbing service, storage space fo
equipment, and a place for records. Where necessary, locker rooms for both m
provided and equipped with toilets, showers, and wash basins.

Receiving and storage areas should be conveniently located where truck delive
and equipment can be made.

Other

Individual study areas are the result of the recognition of the unique proces
takes place within each child. This recognition emphasizes the need for an i
to every student. The individual study carrel concept should be considered b
planning stages of the school.

of spaces to accommodate the following functions: material
ucation level storage for books and supplies; built-in storage for
tion equipment, art, industrial art, dramatics, science, and

should be provided in convenient locations throughout the school plant.
uired plumbing service, storage space for cleaning materials and
Where necessary, locker rooms for both men and women should be
showers, and wash basins.

conveniently located where truck delivery of materials, supplies,

of the recognition of the unique process of learning and how it
recognition emphasizes the need for an individual study area available
dy carrel concept should be considered by the designer during the

CATEGORY IV - MEDIA SYSTEMS

Discussions with professional educators and specialists in media have le
an integrated media system is essential. This system should consist of

1. Amplification
2. Television
3. Computer Aided Instruction/Computer Based Instruction
4. Audio-Visual
5. Communication and Telemetry
6. Remote Access

In the development of these specifications, the standard systems analysis
This approach is based on the premise that the analyst must design to the
model to a point of practicality.

With this premise in mind, all subsystem elements (objectives, stated req
and developed constraints, hardware, methods of software preparation, per
as a total set of attributes, rather than as individual components. In t
examine inter-relationships, discover both common and uncommon patterns a
insure that no single element of any subsystem will be optimized to the d
media system. While it is obvious that Chicago will not immediately empl
DMR considers it necessary to conceptualize an integrated media system th
future developments in media hardware. Regardless of the level of sophis
subsystems, it is necessary to consider their function as it relates to e
and instructional trends.

CATEGORY IV - MEDIA SYSTEMS

l educators and specialists in media have led to the determination that
s essential. This system should consist of the following subsystems:

struction/Computer Based Instruction

Telemetry

specifications, the standard systems analysis approach should be employed.
e premise that the analyst must design to the ideal, then degrade the design
lity.

l subsystem elements (objectives, stated requirements, functions, initial
ardware, methods of software preparation, personnel, etc) should be considered
, rather than as individual components. In this context the consultant will
discover both common and uncommon patterns and most importantly, will try to
of any subsystem will be optimized to the detriment of the entire integrated
vious that Chicago will not immediately employ all of the above subsystems,
conceptualize an integrated media system that is capable of accommodating
hardware. Regardless of the level of sophistication of each of the above
o consider their function as it relates to educational philosophy, methodology

Master Distribution

In the development of any integrated media system, the most important single
system. The distribution system of any integrated media system can be reduce
tions that must be taken into account during the design of any school plant.
conduits and carriers are not determined during early design stages, it is co
possible to implement future uses of media that required additional cable spa
elements or components of a distribution system determine the ultimate potent
plant) for the use of new media subsystems.

The design of the new building should accommodate the following:

Amplification Subsystem

It is essential that amplification systems be planned for use in all instructi
There are three basic types of amplification systems used in schools for heari
induction loop, 2) radio frequency, and 3) hard wire or any other system of gr
available at the time of building construction. In planning this facility the
posed. When children are playing or engaged in non-desk activity, the radio f
a means of allowing freedom yet still in communication with the teacher. When
the teacher, the hard wire system is more effective and provides better sound
work from the same amplifier with broadcast unit. The r.f. system uses a broa
dividual walk-away receivers on each child, while the hard wire has head sets
amplifier. This system capability must be provided in all areas identified by
subsystems, TV, film projection, CAI/CBI and RAS must be interconnected with t
The design of the installation must be developed at the time of the building d
problems associated with the induction loop system as described by Matkin and
fication system and building system designs are developed in concert.

Television Subsystem

This subsystem is comprised of a signal generation and distribution system (abb
and should consist of the following:

- A distribution control and signal storage complex located in a mast
- A video, audio, and synchronization pulse distribution and switchin

[3] Matkin, N.D. and Olsen, W.O., Loop Systems: Classroom Performance, Paper read
the American Speech and Hearing Association, Chicago, (November, 1969)

any integrated media system, the most important single system is the master distribution
tion system of any integrated media system can be reduced to certain physical considera-
ken into account during the design of any school plant. For example, if the size of the
are not determined during early design stages, it is conceivable that it would be im-
future uses of media that required additional cable space. Therefore, the physical
s of a distribution system determine the ultimate potential (in terms of the physical
new media subsystems.

building should accommodate the following:

em

mplification systems be planned for use in all instructional areas of the facility.
types of amplification systems used in schools for hearing impaired children: 1)
io frequency, and 3) hard wire or any other system of greater amplification qualities
of building construction. In planning this facility the latter two systems are pro-
are playing or engaged in non-desk activity, the radio frequency system is employed as
eedom yet still in communication with the teacher. When the child is at his desk facing
wire system is more effective and provides better sound resolution. Both systems may
lifier with broadcast unit. The r.f. system uses a broadcast wave and works with in-
eivers on each child, while the hard wire has head sets connected directly to the
m capability must be provided in all areas identified by the abbreviation, Audio. All
rojection, CAI/CBI and RAS must be interconnected with the amplification subsystem.
allation must be developed at the time of the building design occurs. Elimination of
th the induction loop system as described by Matkin and Olsen[3], can only occur if ampli-
ilding system designs are developed in concert.

rised of a signal generation and distribution system (abbreviated TV in this document)
the following:

tion control and signal storage complex located in a master control center.

udio, and synchronization pulse distribution and switching system.

n, W.O., Loop Systems: Classroom Performance, Paper read at 45th Annual Convention of
nd Hearing Association, Chicago, (November, 1969)

In order that the flexibility of the building be preserved, it will be necessary
indicated in the specifications as including TV with at least two video coaxial
of two video lines will allow "terminal point origination". In other words, por
may be used for observation and other purposes wherever a TV terminal is indicat
them either to video recorders or other peripheral locations, i.e., large group
or the master control center.

The capability of recording and playing back video tapes in color should be anti
visual representation is possible with depth of image. For children depending o
source of concept development, TV is an essential tool.

Computer Assisted Instruction/Computer Based Instruction Subsystem

Provisions for the connection of terminal "hardware" have been specified where t
this document. The use of the word "terminal" in this document refers to any de
or a teletypewriter in combination with a cathode ray tube display, mounted on a

The terminals will permit communication between the computer and students or tea
control center or other peripheral areas by means of various display and respons
terminals will be used for information retrieval, computer aided instruction, ac

It is not envisioned, at this time, that instructional facilities will actually
or the computer proper. The "central processor", as well as the necessary memor
located elsewhere with access through high speed (broad band) telephone lines.
central computer might be available through some type of time sharing basis. Th
ware" to be used in this system will be a function of the sophistication of the
of the individualized instruction. A "J" box (weatherproofed) with coaxial conn
on the building for the purpose of connecting the internal CAI system to coaxial

The main distribution system of the building will also be required to distribute
marked CAI/CBI. Electrical codes do not permit power conductors to occupy the s
or floor cell with communication and signal cables. They actually require that
points, which is often accomplished through a system of continuous metal raceway
main service. In this respect, the CAI/CBI system is no different than requirem
using control and signal conductors.

kibility of the building be preserved, it will be necessary to provide all spaces
ifications as including TV with at least two video coaxial conductors. The use
l allow "terminal point origination". In other words, portable television cameras
vation and other purposes wherever a TV terminal is indicated. The signal from
recorders or other peripheral locations, i.e., large group class spaces, offices
center.

ording and playing back video tapes in color should be anticipated and designed as more
is possible with depth of image. For children depending on vision as the primary
elopment, TV is an essential tool.

truction/Computer Based Instruction Subsystem

nection of terminal "hardware" have been specified where the letters CAI/CBI appear in
se of the word "terminal" in this document refers to any device such as a teletypewriter,
combination with a cathode ray tube display, mounted on a stand or in a carrel.

rmit communication between the computer and students or teachers located in the master
r peripheral areas by means of various display and response devices. The above-mentioned
for information retrieval, computer aided instruction, accounting and statistical anaylsis.

at this time, that instructional facilities will actually contain the "central processor"
. The "central processor", as well as the necessary memory and storage units, will be
access through high speed (broad band) telephone lines. It has been suggested that a
be available through some type of time sharing basis. The complexity and amount of"hard-
is system will be a function of the sophistication of the programmed materials and the level
instruction. A "J" box (weatherproofed) with coaxial connectors will be mounted externally
e purpose of connecting the internal CAI system to coaxial cable service.

system of the building will also be required to distribute data signals to all spaces
rical codes do not permit power conductors to occupy the same conduit area, trench duct,
munication and signal cables. They actually require that the system be grounded at all
accomplished through a system of continuous metal raceways, grounded on the building's
respect, the CAI/CBI system is no different than requirements posed by all other systems
al conductors.

The designer engineer will need to keep the above factors in mind in order that the flexibility of this building is not impaired or that the stated educational functions to be performed are possible.

Audio-Visual Subsystem

The standards presented in this document reflect the national standards prepared by a Joint Committee of the American Association of School Librarians and the Department of Audio-Visual Instruction of the National Education Association, and have been augmented to enhance the media program.

The following general audio-visual requirements apply to all spaces in this document where the code symbol X is indicated beside the heading A-V under architectural considerations. Regardless of the size or configuration of the teaching-learning space, consideration must be given to the following:

1. Controlling and varying light, both artificial and natural, in the teaching-learning area.

2. Providing electrical power and sufficient amperage and voltage with convenience and safety.

3. Controlling sound to eliminate reverberation and unwanted sound transmission between teaching-learning spaces, and to liven and deaden (damp) room areas as required.

4. Providing screens on which to reflect projected still and motion picture images.

5. Locating television monitors and other display units with regard to the proper sight lines and signal distribution access.

6. Seating to provide comfort, convenience, and physical well being in all the various instructional spaces and locations.

7. Displaying instructional materials and products throughout the period of instruction.

8. Storing physical equipment, student products, supplies, and other items needed by students and teachers.

9. Providing for individual learning spaces equipped with various media signal feeds and carrels or terminal configurations.

Communications and Telemetry Subsystem

The telephone (conventional) and telemetry systems specified shall be designated b
COM/TLM. This system involves the conventional telephone normally installed in a
levels of sophistication. For example, each telephone unit may be equipped with v
accessories such as intercom circuits, lights, multiple circuit push button switch
on the functions to be performed. It is not within the scope of this document to
the best switchboards, switching equipment or other phone system components. DMR
be made by the telephone company serving this geographical area. However, where i
and multiple circuits are desirable, appropriate notes have been included in the m
associated with each space described herein.

An administrative intercom is specified for the entire school plant. It is anticip
be a conventional, partial duplex (two-way) intercom system. The peripheral stati
are generally composed of a permanent-management type speaker and three position m
switch.

The console that is designated to accompany such systems is frequently located in
the school and is considerably more complex than the peripheral remote stations.
cassette recordex reproducer be included in this console unit to enable schedule-c
music rather than by a conventional bell system. Further, the amplitude of this s
should be automatically variable so that it rises and falls in amplitude over a gi
justable) on a programmed basis. A light signaling device must be designed for t
handsets to announce a call.

The telemetry system specified for this plant is primarily used for synchronizing a
clocks, although additional functions could be controlled, i.e., fire alarms and l
lights, sprinklers, etc. with the basic telemetry system.

stem

elemetry systems specified shall be designated by the abbreviation:
conventional telephone normally installed in a school but in various
mple, each telephone unit may be equipped with various augmentive
its, lights, multiple circuit push button switches, etc., depending
It is not within the scope of this document to identify or recommend
quipment or other phone system components. DMR recommends that a study
erving this geographical area. However, where intercoms are required,
e, appropriate notes have been included in the media systems column
ed herein.

ified for the entire school plant. It is anticipated that this will
(two-way) intercom system. The peripheral stations usually employed
ent-management type speaker and three position manually operated talk-back

ccompany such systems is frequently located in the administrative area of
complex than the peripheral remote stations. DMR recommends that a
cluded in this console unit to enable schedule-change announcements via
bell system. Further, the amplitude of this stimulus or signal music
that it rises and falls in amplitude over a given period of time (ad-
light signaling device must be designed for the console and all remote

this plant is primarily used for synchronizing and actuating the remote
ns could be controlled, i.e., fire alarms and light signals, building
asic telemetry system.

Remote Access Subsystem

The remote access system (abbreviated RAS) to be installed within this faci
function as an integral element of the complete media system for the buildi

The conventional "dial" or remote access system consists essentially of a m
that permits any number of individual students or instructors to achieve se
number of continually available audio and video programs--usually recorded
standard film formats. A means of encoding a request signal, such as a dia
located in spaces remote from the Master Control. A numerical code corresp
aural sequence of information is entered at the terminal location. This in
the Master Control and used to activate the proper switching sequence requi
back programmed materials. Electronically reproduced information is distri
terminal based on the decoded index signal.

When the abbreviation RAS is marked X as part of an area specification a "t
be considered as a built-in piece of equipment for that space. Permanently
video magnetic tape transports will be located in the Master Control. In ad
audio and video switching units including their respective power supplies wi
enclosures.

In summary, the RAS should provide the following advantages:

1. Increased utilization of audio-visual material resources -- due to th
the system.

2. A means of demonstrating and utilizing individualized instructional t

3. Improved dissemination system, providing greater flexibility for indi
or classroom space use.

4. Facilitates review for students who need it, e.g., students missing l
or other reasons.

5. Dissemination of media according to international schedules rather tha
dictated by broadcast schedules and other limitation.

ed RAS) to be installed within this facility should be designed to
the complete media system for the building.

ccess system consists essentially of a means of remote control
al students or instructors to achieve separate access to a
io and video programs--usually recorded on magnetic tape or
encoding a request signal, such as a dial or touchtone unit, is
aster Control. A numerical code corresponding to the visual or
tered at the terminal location. This information is decoded at
vate the proper switching sequence required to locate and play
nically reproduced information is distributed to the appropriate
signal.

X as part of an area specification a "touchtone" encoder should
f equipment for that space. Permanently installed audio and
be located in the Master Control. In addition all necessary
luding their respective power supplies will be housed in nearby

he following advantages:

o-visual material resources -- due to the convenience of

utilizing individualized instructional techniques.

, providing greater flexibility for individual, small group,

ts who need it, e.g., students missing lectures for health

ing to international schedules rather than a "real time" basis
es and other limitation.

The system to be specified in the final design of a facility will be specified on the
educational functions that it will perform. No standard system is now commercially av
serve all functions without modification. Furthermore, additional requirements will b
RAS to handle live television signals throughout the building. The system will, there
patible with a so-called standard system. However, it will be expandable by virtue of
will be of modular design.

fied in the final design of a facility will be specified on the basis of the
that it will perform. No standard system is now commercially available that will
thout modification. Furthermore, additional requirements will be placed on the
evision signals throughout the building. The system will, therefore, be incom-
ed standard system. However, it will be expandable by virtue of the fact that it
ign.

Electrical

Outlets: If the induction power source, or the electronic carpet
to work areas, instructional areas and offices should be carried
neither system is used, provision for 110 volt electrical service
Floor and/or ceiling grid systems should be considered as a means
without permanent walls.

Regardless of electrical source utilized, the many electronic teac
will require that:

1. The entire wiring system should be adaptable to future nee
without extensive or expensive changes.

2. Amperage and voltage requirement should be determined by t
based on the stated plans for anticipated use of electrica
needs in this building.

3. Receptacle circuits should be no less than 20 amperes at 1
areas with activities that require special load requirement
television control facility, computer terminal areas, carre

4. Enough circuits should be supplied to permit simultaneous o
in any or all classrooms.

5. Three duplex outlets should be provided on each peripheral
8-10 feet on centers, not more than 36 inches and not less
floor. If installed in the floor they should be recessed a

6. Additional outlets should be provided above work surfaces o

7. All outlets should be grounded to the building ground.

CATEGORY V - UTILITIES

ower source, or the electronic carpet is operational, electric power
areas and offices should be carried in or on the floor. However, if
ision for 110 volt electrical service must be provided in all areas.
stems should be considered as a means of providing service to areas

rce utilized, the many electronic teaching devices to be used

stem should be adaptable to future needs, capable of alteration
expensive changes.

requirement should be determined by the electrical engineer
lans for anticipated use of electrical equipment and circuiting
ng.

should be no less than 20 amperes at 110 volts AC and more for
that require special load requirements (media control facility,
cility, computer terminal areas, carrel areas, etc.).

d be supplied to permit simultaneous operation of equipment
oms.

should be provided on each peripheral class space wall, about
not more than 36 inches and not less than 18 inches from the
in the floor they should be recessed and properly protected.

ould be provided above work surfaces of counters or tables.

grounded to the building ground.

8. Electric power conduits should be oversized to permit later alterations an raceway should be conveniently accessible.

9. Communication conduits containing lines (or space for them) for intercom u cables for television should be installed between classrooms and central located in the media center.

10. Front to back communication control conduits should be installed in each c area and large group facility in which projection or audio equipment will conjunction with these spaces.

11. Signal carriers and conduits should be stubbed into all peripheral walls be mounted "J" boxes and suspended ceilings (if used).

Lighting: It is very important that special attention be given to the general ligh school building, particularly in instructional areas. It would be highly desirable lighting could be provided with switches which would not only turn light off and on could change the intensity of the lighting to vary with the subject matter being ta equipment used, the time of day and the age of the pupils. It is now possible, bot and economically, to alleviate this problem through the use of remote controlled li Remote controlled lighting makes it possible to control light banks individually, t and to change light color.

Artificial lighting should be provided as if no other light source were available a should be without glare or shadow. Separate light switches should be installed for sections of the general learning areas. Since interior space may frequently be rea lighting system should be planned to adjust to various physical rearrangements. So particular requirements for electrical service and are listed here:

- Cooking stations - 220 volt service to electric ranges and ovens.
- Science - 110 volt outlets overhead at all work stations. Variable voltage lab stations located in facility preparation area.

duits should be oversized to permit later alterations and additions,
conveniently accessible.

uits containing lines (or space for them) for intercom units and coaxial
sion should be installed between classrooms and central control facilities
ia center.

unication control conduits should be installed in each class space
up facility in which projection or audio equipment will be utilized in
hese spaces.

d conduits should be stubbed into all peripheral walls between wall
and suspended ceilings (if used).

tant that special attention be given to the general lighting in the
ly in instructional areas. It would be highly desirable if general
with switches which would not only turn light off and on, but which
of the lighting to vary with the subject matter being taught, the
day and the age of the pupils. It is now possible, both technologically
ate this problem through the use of remote controlled lighting systems.
makes it possible to control light banks individually, to vary brightness,

be provided as if no other light source were available and illumination
shadow. Separate light switches should be installed for the various
rning areas. Since interior space may frequently be rearranged, the
lanned to adjust to various physical rearrangements. Some areas have
electrical service and are listed here:

220 volt service to electric ranges and ovens.

outlets overhead at all work stations. Variable voltage control unit for
d in facility preparation area.

- Typing stations - floor outlets for electrically operated office equipm
- Art - 110 volt outlets at 8 to 10 feet intervals above work counters.
- Electric kilns - usually on a separate 220 volt circuit.
- Craft - 220 volt, 3 phase power is more efficient for electric motors o
- Media Center - 110 volt, 1 phase, 20 ampere circuits for machines of 12
- Electric outlet locations should anticipate fixed and portable equipmen counters and back splash elevation.

In instructional areas two light systems should be designed, a fluorescent syst shadowless light throughout, and an incandescent system that can be controlled the level of light. Balasts for fluorescent systems that will not interfer wit must be installed. Safety lights must be installed as an auxiliary system.

Plumbing: Complete, well-arranged and well-maintained rest rooms are essential venience of the school child. Rest rooms for pupils of both sexes should be lo to provide greater convenience. It is not necessary to widely separate the res although their entrances should be screened, but without doors. Wash areas sho not in the rest rooms.

Special rest rooms should be provided for the administration staff, teachers an office or work area.

Drinking fountains should be of an impervious materials, of a type that will no pupil to come in contact with the nozzle, or permit the water to fall back upon tains should be the appropriate height for the pupils who are to utilize them. convenient as possible. Where construction permits, fountains should be recesse

Mechanical

Elevators: Elevators should be installed for the purpose of moving supplies and transporting children and adults whose physical condition does not permit them escalators should be considered for the major circulation routes in multi-level

floor outlets for electrically operated office equipment.

ets at 8 to 10 feet intervals above work counters.

ually on a separate 220 volt circuit.

phase power is more efficient for electric motors of 1/2 horsepower up.

volt, 1 phase, 20 ampere circuits for machines of 1200-1500 watts.

ations should anticipate fixed and portable equipment; also, heights of work splash elevation.

light systems should be designed, a fluorescent system, to provide uniform , and an incandescent system that can be controlled by rheostat for varying s for fluorescent systems that will not interfer with amplification systems lights must be installed as an auxiliary system.

rranged and well-maintained rest rooms are essential for the comfort and the con- d. Rest rooms for pupils of both sexes should be located in instructional areas nce. It is not necessary to widely separate the rest rooms for boys and girls, ould be screened, but without doors. Wash areas should be in instructional areas,

e provided for the administration staff, teachers and service workers within their

e of an impervious materials, of a type that will not permit the mouth of the th the nozzle, or permit the water to fall back upon the nozzle. Drinking foun- iate height for the pupils who are to utilize them. The fountains should be as ere construction permits, fountains should be recessed.

be installed for the purpose of moving supplies and equipment, as well as dults whose physical condition does not permit them to climb stairs. High speed ered for the major circulation routes in multi-level building.

Clock System: A light signal and tone system with automatic program tied to a maste
its control panel in the general office. A clock should be placed in every instructi
auxiliary area, as well as in several common areas. A light or music signal is prefe
bell, except for any outdoor teaching station or playfield.

Fire Alarm System: A fire and disaster alarm system that meets the specifications ar
Chicago code is required. Flashing lights or other visual signaling device must be b

Other

Circulation and Traffic: A number of circulation patterns must be taken into account
students, staff, and visitors to and from the site, the movement of supplies, books,
the removal of waste will need to be considered. Primary factors should include the
of students and patrons as well as the educational requirements for primary relations

Student safety is a significant and constant consideration mandated throughout the pl
design of schools should include steps only where they are absolutely necessary. Doo
and should not open into pedestrian traffic; projections should be avoided; and areas
ditions are normally found should receive special attention. Stairways, corridors, s
enclosed areas, and wet floor areas should all receive special safety design.

Pedestrian and vehicular traffic movement and its attendant problems, including movem
and to and from school, will require attention from the school designer. Circulation
must be studied and zoned in such a manner as to avoid pedestrian traffic congestion,
easy flow of students between all areas of the school.

Pupils will arrive at and depart from school in automobiles, public conveyances, and
to the school should be arranged to handle the pedestrian traffic flow from each of t
conflict. Bus loading zones should be established away from the arrival and departure
Special consideration must be given to pupils who travel on foot. Truck deliveries o
should be oriented to avoid any conflict with student pedestrian traffic and arranged
danger of moving vehicles is minimized.

al and tone system with automatic program tied to a master clock should have
eral office. A clock should be placed in every instructional station and
n several common areas. A light or music signal is preferred to any type of
teaching station or playfield.

nd disaster alarm system that meets the specifications and requirements of
lashing lights or other visual signaling device must be built into the unit.

number of circulation patterns must be taken into account. The movement of
s to and from the site, the movement of supplies, books, and equipment, and
ed to be considered. Primary factors should include the safety and convenience
ell as the educational requirements for primary relationships of spaces.

ant and constant consideration mandated throughout the planning process. The
lude steps only where they are absolutely necessary. Doors should be recessed
estrian traffic; projections should be avoided; and areas where hazardous con-
ould receive special attention. Stairways, corridors, science areas, glass-
r areas should all receive special safety design.

ffic movement and its attendant problems, including movement within the school
require attention from the school designer. Circulation within the school itself
such a manner as to avoid pedestrian traffic congestion, and yet to permit the
all areas of the school.

part from school in automobiles, public conveyances, and on foot. Entrances
nged to handle the pedestrian traffic flow from each of these sources without
should be established away from the arrival and departure of other large groups.
given to pupils who travel on foot. Truck deliveries of supplies and equipment
ny conflict with student pedestrian traffic and arranged in such a way that the
minimized.

A traffic study involving all facets of pedestrian and vehicular movement should orient the school to the site in order to pre-plan the access to the school from methods of movement with safety as the major consideration.

Community use of facilities requires that the building be zoned for the possibili portions, yet allowing entrance to certain other areas for evening, community, or provisions must be made for security of property within such areas.

Parking: It is desirable to provide off-street parking spaces at the ratio of on of the school, plus ten spaces for visitors. At least one parking space for an e provided on the site.

Provision should be made for bicycle racks, at least enough spaces for one-fourth

facets of pedestrian and vehicular movement should precede any attempt to
in order to pre-plan the access to the school from all sources and by all
ty as the major consideration.

equires that the building be zoned for the possibility of closing entire
ce to certain other areas for evening, community, or adult use. Special
ecurity of property within such areas.

provide off-street parking spaces at the ratio of one space per staff member
s for visitors. At least one parking space for an emergency vehicle must be

bicycle racks, at least enough spaces for one-fourth the student population.

SPACE ALLOCATIONS AND RELATIONSHIPS

For planning purposes, the activities within the facility have been broad
cluding Instructional, Learning Resource Center, Diagnostic/Evaluation, A
sixth area, is the space required to house and support the other five and
building, walls, utilities, restrooms, circulation and maintenance facili
the space outside the physical structure and includes the play and outdoo
areas reflect the useable (net) areas of the facility.

Each area will be examined in four ways: First, by a brief description o
(The descriptions are not intended as totally inclusive, but highlight si
second, by listing the individual spaces with the area and then net squar
drawing representing spaces and area relationships; and fourth, by noting
Considerations.

The total facility must have internal integrity even when modifications ar
facility may adjoin an existing elementary school or be an integral part o
ing children. In either case, the external configurations and constructio
the total structure, not uniquely identifiable. Internal movement from th
of the total facility should be possible without the physical structure im
senting the feeling that the hearing impaired children are in another buil

AND RELATIONSHIPS

oses, the activities within the facility have been broadly divided into five areas, in-
onal, Learning Resource Center, Diagnostic/Evaluation, Administration, and Service. A
e space required to house and support the other five and contains the shell of the
utilities, restrooms, circulation and maintenance facilities. A seventh area contains
the physical structure and includes the play and outdoor study areas. The first five
useable (net) areas of the facility.

examined in four ways: First, by a brief description of the total area and its components.
are not intended as totally inclusive, but highlight significant aspects of the area.);
the individual spaces with the area and then net square footage; third, by a schematic
ng spaces and area relationships; and fourth, by noting exceptions to the Architectural

must have internal integrity even when modifications are made in internal spaces. The
n an existing elementary school or be an integral part of a new school facility for hear-
either case, the external configurations and construction details should be designed as
e, not uniquely identifiable. Internal movement from this facility to any other portion
ity should be possible without the physical structure impinging on this movement or pre-
g that the hearing impaired children are in another building.

A

INSTRUCTIONAL LEARNING AREAS

LARGE GROUP AREA
INSTRUCTIONAL UNIT AREA
TUTORIAL AREA
COUNSELING AREA
TEACHER PLANNING
LEARNING EXPERIENCES CENTER
SPECIAL FACILITIES

CONCEPTUAL PLAN

The teaching-learning process will take place in one or more of the specially
inside as well as the outdoor areas specified in Section F. Emphasis will be
social needs of the children according to their specific capabilities and age

It is desirable to provide each child with the opportunity to identify with so
vironment. In this vein, groups should be formed that will encourage children
their teacher and their instructional area. Because small groups can encourag
pupil to teacher ratio is 6:1 it would seem appropriate to confirm this as an

Because other activities in the learning process may involve larger groups of
combinations of instructional units seem essential for good learning. In addi
utilization of staff and materials may be extended through larger groups. Tea
by combining instructional units and teachers can develop many ways of develop
aids and ways of extending their own expertise to a wider range of children tha

It will also be possible to provide greater opportunities for student mobility
extended instructional unit. For purposes of planning, an extended instructio
instructional units.

A desirable counselor ratio of 1:108 children can be further enhanced by develo
of six extended instructional units; 18 teachers and one counselor plus additio
make available an outstanding planning unit for the development of the program.
primarily the needs of the children, but also offer guidance to the professiona

Children are respondents to environmental stimulation. Hearing does occur thro
Random motivation, while reliable, does not lead to predictable response, cont
predictable responses, therefore, a means of controlling the child's environmen
a valuable tool in the learning process. The ability to create an environment
controlling the variables entering the child's perceptual system can enhance th
of the hearing impaired child.

FACILITY IMPLICATIONS

- Tutorial instruction in auditory discrimination and speech training requires a
instructional unit should have one such unit available. In areas where multi-ha
the tutorial area could be used as a rest area on occasion for children with hyp

A

INSTRUCTIONAL LEARNING AREAS

g process will take place in one or more of the specially designed instructional areas
e outdoor areas specified in Section F. Emphasis will be placed on the academic and
hildren according to their specific capabilities and age level.

ovide each child with the opportunity to identify with someone or something in his en-
ein, groups should be formed that will encourage children to relate to one another,
ir instructional area. Because small groups can encourage this, and a recommended
o is 6:1 it would seem appropriate to confirm this as an instructional unit.

ies in the learning process may involve larger groups of children in play, rhythms,
uctional units seem essential for good learning. In addition to these benefits, the
and materials may be extended through larger groups. Team planning may be possible
ional units and teachers can develop many ways of developing team planned teaching
nding their own expertise to a wider range of children than in single units.

ble to provide greater opportunities for student mobility from one unit to another within
l unit. For purposes of planning, an extended instructional unit is composed of three (3)

ratio of 1:108 children can be further enhanced by developing a counseling unit composed
uctional units; 18 teachers and one counselor plus additional auxiliary personnel will
standing planning unit for the development of the program. The counselor would serve
f the children, but also offer guidance to the professional staff.

nts to environmental stimulation. Hearing does occur through stimulation and motivation.
ile reliable, does not lead to predictable response, controlled motivation can lead to
, therefore, a means of controlling the child's environment vis a vis stimulation, can be
e learning process. The ability to create an environment or several environments, thereby
les entering the child's perceptual system can enhance the total communication system
ed child.

n auditory discrimination and speech training requires a small isolated area. Each
uld have one such unit available. In areas where multi-handicapped children are studying,
d be used as a rest area on occasion for children with hyper-activity problems.

- Age differences and activities do require specific details that are designed fo
school and primary age children will require more square footage in the large g
mediate age children. Small instructional areas will require approximately the
while the tutorial area may be smaller. Other adjustments will occur in the fu
and water fountain heights. Large group areas should accommodate play activiti
and art activities.

- Multi-handicapped children will require large group space equivalent of pre-sch
children and larger square footage allocations for small group instruction to a
study booths in addition to the tutorial area. Storage of manipulative materia
these areas also place additional square footage requirements for this area.

- The office/work area of the counselor must have space for both the counselors wo
waiting to see or talk with the counselor. This latter area should contain book
furniture. This area should also be able to serve as a teacher/counselor confer

- The teacher planning area should serve as the focal point of team planning and m
The space should be so detailed as to contain provisions for viewing films and v
of classroom activities. This space should also serve as the location of any st
facility, containing desks and file cabinets.

- The environmental experience center should be circular to accommodate a total pr
design encircling the child. The space should be capable of holding 6 groups co
with back rests.

ies do require specific details that are designed for that group. Pre-
dren will require more square footage in the large group area than inter-
instructional areas will require approximately the same square footage,
be smaller. Other adjustments will occur in the furniture size, toilet
Large group areas should accommodate play activities, general assembly

will require large group space equivalent of pre-school and primary age
footage allocations for small group instruction to accommodate individual
the tutorial area. Storage of manipulative materials, and equipment in
ional square footage requirements for this area.

counselor must have space for both the counselors work space and children
the counselor. This latter area should contain book shelves, comfortable
also be able to serve as a teacher/counselor conference area.

ould serve as the focal point of team planning and material preparations.
led as to contain provisions for viewing films and video tape replays
is space should also serve as the location of any student teachers in the
nd file cabinets.

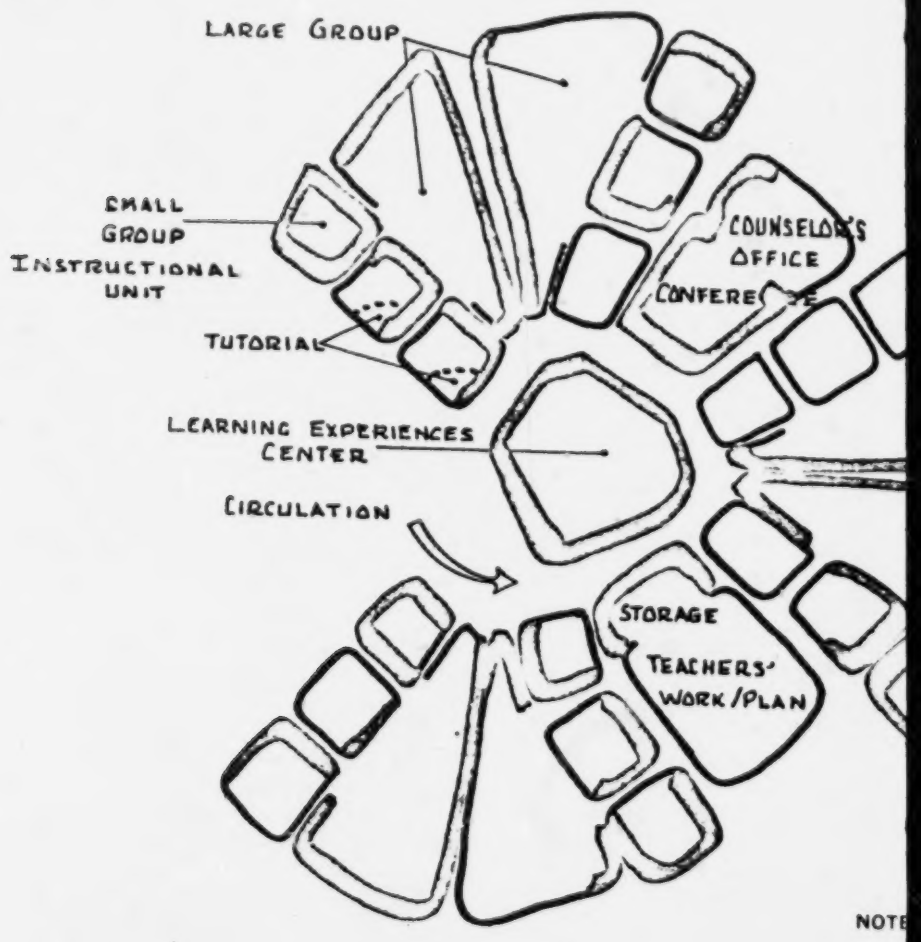
center should be circular to accommodate a total projection and amplification
The space should be capable of holding 6 groups comfortably on the floor,

AREA COMPONENTS	SQUARE FOOTAGE ALLOCATION
INSTRUCTIONAL LEARNING UNITS	
1) Large Group Area	
Pre-School Age	1,400
Primary Age	1,400
Intermediate Age	1,200
Multi-Handicapped	1,400
2) Instructional Unit Area	
Pre-School Age	520
Primary Age	520
Intermediate Age	520
Multi-Handicapped	725
3) Tutorial Area*	
Pre-School Age	120
Primary Age	120
Intermediate Age	160
Multi-Handicapped	160
4) Counseling Area	
Office Area	75
Reception/Conference Area	225
5) Teacher Planning	
Work/Planning Area	1,800
Resource Materials Storage	400
6) Learning Experiences Center	
Environmental Area	2,080
Environmental Control Unit	250
7) Special Facilities	
Crafts	1,400
Home Economics	1,400

*Included as a part of the square footage allocation for the Instructional Unit.

SCHEMATIC

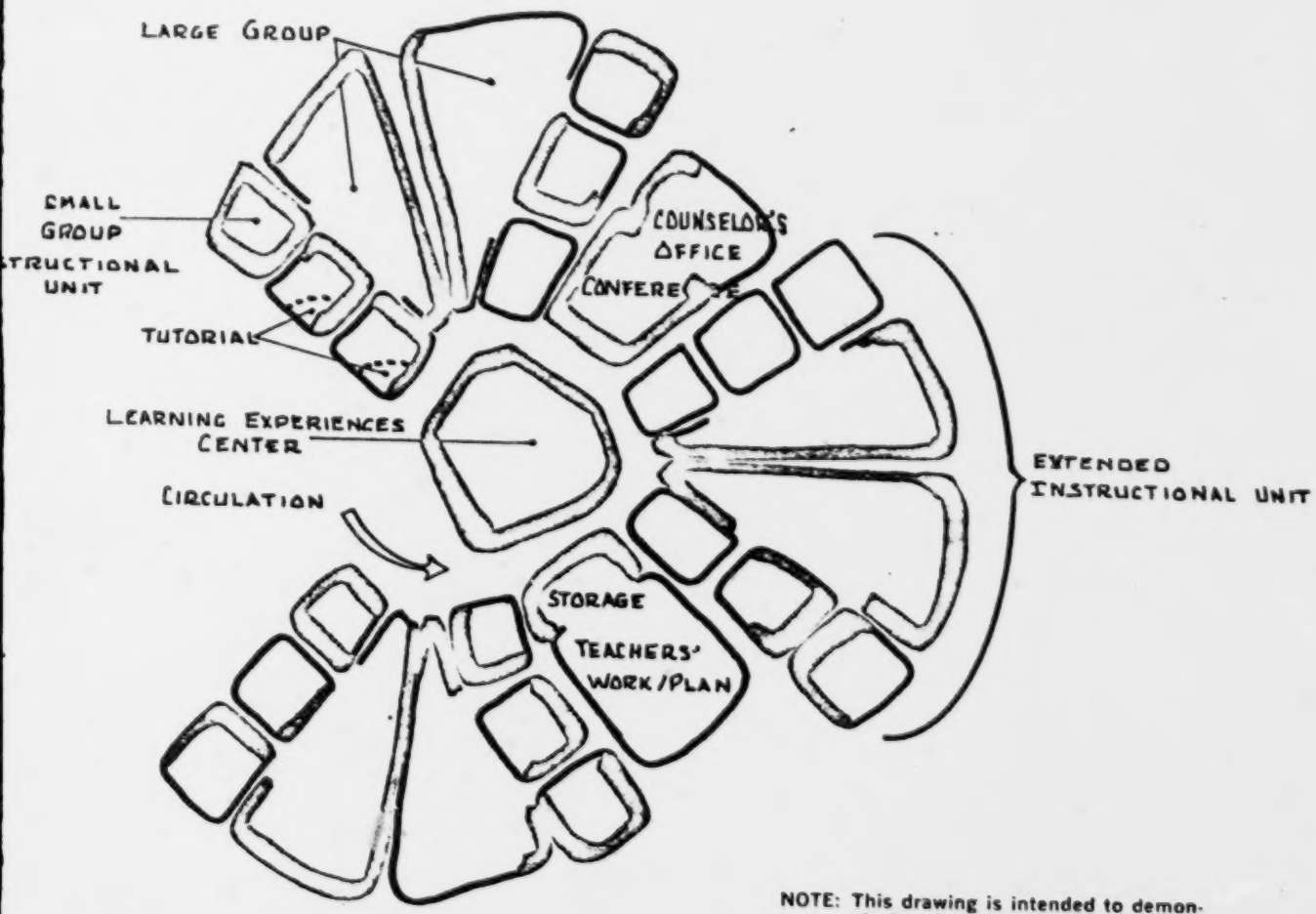
INSTRUCTIO



NOTE

COUNSELING UNIT

INSTRUCTIONAL LEARNING AREAS



COUNSELING UNIT

NOTE: This drawing is intended to demonstrate relationships between spaces and is schematic only. True proportion has not been observed, and shapes are not intended to represent desired design.

SPACE

LARGE GROUP AREA (Pre-School) (Primary/Multi)

UNIT CAP.	NO. UNITS	UNIT SQ. FT.
18	1	1,400

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS						
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	
1	X	X	2		X	X	3	X		X	4	X	X		X	X	X	X	NA	X	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer tp exceptions to General Requirements.

EXCEPTIONS

1. Ceiling height a minimum of 12'.
2. Tartan brand floor or other smooth surface that will magnify floor generated vibrations.
3. Relate directly to three instructional units.
4. APPENDIX B.
5. Install hot and cold water in sink unit. Install toilet facilities for boys and girls in
6. Provide conduit terminations for media systems:

Amplification	CAI/CBI	RAS
TV	COM/TLM	

)	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
ti)	18	1	1,400	1,400

ENVIRONMENT				III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	3	X		X	4	X	X		X	X	X	X	NA	X	X		X	5	X	6

pecified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

of 12'.

er smooth surface that will magnify floor generated vibrations.

instructional units.

in sink unit. Install toilet facilities for boys and girls in each area.

ons for media systems:

BI RAS
LM

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT.
LARGE GROUP AREA (Intermediate)	18	1	1,200

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTE					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	
1	X	X	2		X	X	3	X		X	4	X	X		X	X	X	X	NA	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Req

EXCEPTIONS

1. Ceiling height a minimum of 12'.
2. Tartan brand floor or other smooth surface that will magnify floor generated vibrat
3. Relate directly to three instructional units.
4. APPENDIX B.
5. Install hot and cold water in sink unit. Install toilet facilities for boys and gi
6. Provide conduit terminations for media systems:

Amplification	CAI/CBI	RAS
TV	COM/TLM	

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
18	1	1,200	1,200

NT		III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
		X	4	X	X		X	X	X	X	NA	X	X		X	5	X	6

ages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

h surface that will magnify floor generated vibrations.

ional units.

k unit. Install toilet facilities for boys and girls in each area.

media systems:

RAS

SPACE		UNIT CAP.	NO. UNITS	UNIT SQ. FT.
INSTRUCTIONAL UNIT	(Pre-School) (Primary/Intermediate)	6	1	520

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTE				
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC
X	1	X	X	2	X	X	3	X		X	4	X	X		X	X	X	X	NA

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Req

EXCEPTIONS

1. Long-term wall between instructional unit and large group area.
2. Door at entry necessary.
3. Relate directly to large group area and other instructional units.
4. APPENDIX B.
5. Install toilet facilities for boys and girls in each pre-school and primary age inst
6. Provide conduit termination for media systems:

Amplification	CAI/CBI	RAS
TV	COM/TLM	

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
1) ntermediate)	6	1	520	520

ENVIRONMENT				III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	3	X		X	4	X	X		X	X	X	X	NA	X	X		X	5	X	6

pecified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

tructional unit and large group area.

roup area and other instructional units.

for boys and girls in each pre-school and primary age instructional unit.

n for media systems:

I/CBI RAS
M/TLM

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT.
INSTRUCTIONAL UNIT (Multi)	6	1	725

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS						
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS
X	1	X	X	2	X	X	3	4		X	5	X	X		X	X	X	X	NA	X	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

EXCEPTIONS

1. Long-term wall between instructional unit and large group area.
2. Door at entry necessary.
3. Relate directly to large group area.
4. Color selection significant in this area.
5. Install study booths with extended side panels. APPENDIX B.
6. Install toilet facilities for boys and girls in each pre-school and primary age unit.
7. Provide conduit terminations for media systems:

Amplification	CAI/CBI	RAS
TV	COM/TLM	

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
6	1	725	725

I. ENVIRONMENT				III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X	3	4		X	5	X	X		X	X	X	X	NA	X	X		X	6	X	7

s specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

nstructional unit and large group area.

group area.

ant in this area.

extended side panels. APPENDIX B.

s for boys and girls in each pre-school and primary age unit.

ons for media systems:

AI/CBI RAS
M/TLM

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT.
TUTORIAL AREA (Pre-School - Primary)	1-2	1	120

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEM					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	
X	1	2	X	3	X	X	X	X		X	X	X	X		X	X	X	X	NA	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requi

EXCEPTIONS

1. Long-term wall; unit may be relocated within instructional unit as desired. Walls must have minimum sound attenuation factor of 48.
2. Windows or visual access from instructional unit into tutorial area.
3. Door at entry.
4. Provide conduit terminations for media systems:

Amplification	CAI/CBI	RAS
TV	COM/TLM	

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
ol - Primary)	1-2	1	120	120

II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X	X	X	X		X	X	X	X		X	X	X	X	NA	X	X		X	NA	X	4

uirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

may be relocated within instructional unit as desired.
imum sound attenuation factor of 48.

ccess from instructional unit into tutorial area.

ninations for media systems:

CAI/CBI RAS
COM/TLM

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT.
TUTORIAL AREA (Intermediate/Multi)	1-2	1	160

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM
X	1	2	X	3	X	X	X	X		X	X	X	X		X	X	X	X	NA	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirem

EXCEPTIONS

1. Long-term wall; unit may be relocated within instructional unit as desired. Walls must have minimum sound attenuation factor of 48.
2. Windows or visual access from instructional unit into tutorial area.
3. Door at entry.
4. Provide conduit terminations for media systems:

Amplification	CAI/CBI	RAS
TV	COM/TLM	

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
i)	1-2	1	160	160

RONMENT			III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X	X		X	X	X	X		X	X	X	X	NA	X	X		X	NA	X	4

ied in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

elocated within instructional unit as desired.
d attenuation factor of 48.
m instructional unit into tutorial area.

for media systems:

BI RAS
LM

SPACE	UNIT CAP.	NO. UNITS	UN
TUTORIAL AREA (Intermediate/Multi)	1-2	1	

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV.			
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	
X	1	2	X	3	X	X	X	X		X	X	X	X		X	X	X	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions t

EXCEPTIONS

1. Long-term wall; unit may be relocated within instructional unit as desired. Walls must have minimum sound attenuation factor of 48.
2. Windows or visual access from instructional unit into tutorial area.
3. Door at entry.
4. Provide conduit terminations for media systems:

Amplification	CAI/CBI	RAS
TV	COM/TLM	

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
e/Multi)	1-2	1	160	160

II. ENVIRONMENT				III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher ions	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X	X	X		X	X	X	X		X	X	X	X	NA	X	X		X	NA	X	4

ents specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

y be relocated within instructional unit as desired.
n sound attenuation factor of 48.

ss from instructional unit into tutorial area.

tions for media systems:

CAI/CBI RAS
COM/TLM

SPACE	UNIT CAP.	NO. UNITS	UNIT S
COUNSELING AREA (Office)	1-2	1	75

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MED			
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V
X	1	2	X		X	X	3	X		X	4	X	X		X	X	NA	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to Ge

EXCEPTIONS

1. Long-term walls; unit may be relocated within the facility as desired.
2. Windows or sliding glass doors for visual access from other parts of the instr
3. Relate directly to reception or general circulation area.
4. Provide conduit terminations for media systems:

Amplification	COM/TLM
TV	RAS

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
1-2	1	75	75

II. ENVIRONMENT				III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X	3	X		X	4	X	X		X	X	NA	X	NA	X	X		X	X	X	4

s specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

be relocated within the facility as desired.

doors for visual access from other parts of the instructional areas.

ion or general circulation area.

ons for media systems:

M/TLM
S

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ.
COUNSELING AREA (Reception/Conference)	6-8	1	225

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA				
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	
X	1	2	X		X	X	3	X		X	X	X	X		X	X	NA	X	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to Gener

EXCEPTIONS

1. Long-term wall; unit may be relocated within the facility as desired.
2. Windows or sliding glass doors for visual access from other areas of the instru
3. Relate directly to general circulation area and counselor's office.
4. Provide conduit terminations for media systems:

   Amplification COM/TLM
   TV

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
A (Reception/Conference)	6-8	1	225	225

RE		II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X		X	X	3	X		X	X	X	X		X	X	NA	X	NA	X	NA		X	X	X	4

to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

all; unit may be relocated within the facility as desired.

sliding glass doors for visual access from other areas of the instructional units.

ctly to general circulation area and counselor's office.

duit terminations for media systems:

cation COM/TLM

SPACE

TEACHER PLANNING (Work/Planning)

UNIT CAP. 10-12

NO. UNITS 1

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT						
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	
X	1	X	X	2	X	X	3	X		X	NA	X	X		X	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to

EXCEPTIONS

1. Long-term wall; unit may be relocated if necessary.
2. Door at entry.
3. Relate directly to general circulation area and instructional areas.
4. Provide conduit terminations for media systems:

Amplification	CAI/CBI	RAS
TV	COM/TLM	

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
(Work/Planning)	10-12	1	1,800	1,800

	II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
2	X	X	3	X		X	NA	X	X		X	X	X	X	NA	X	X		X	X	X	4

neral Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

; unit may be relocated if necessary.

v to general circulation area and instructional areas.

t terminations for media systems:

tion CAI/CBI RAS
COM/TLM

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ.
TEACHER PLANNING (Resource Storage)	-	1	400

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA				
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	
X	1	X	X		X	X	2	X		X	NA	NA	X		NA	NA	NA	NA	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to Gene

EXCEPTIONS

1. Long-term wall; unit may be relocated if necessary.
2. Relate to work/planning area.
3. Install hot and cold water in sink unit.

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
ce Storage)	-	1	400	400

II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	X	2	X		X	NA	NA	X		NA	NA	NA	NA	NA	NA	NA		X	3	X	

ements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

may be relocated if necessary.

ng area.

water in sink unit.

SPACE

LEARNING EXPERIENCES CENTER
Environmental Area

UNIT CAP. 40

NO. UNITS 1

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV		
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI
1	2	NA	3	4	X	X	5	X		NA	NA	NA	X	6	X	NA	NA

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions

EXCEPTIONS

1. Ceiling domed to serve as planitarium or curved projection surface.
2. Projection surface on entire wall surface.
3. Floor needs to be designed to accommodate the installation of a planitariu
4. Entrance and exit on same wall.
5. Centrally related to all instructional areas, accessible to outside area f
6. Area must accommodate projection units from all angles, film strip and fil to introduce odors into the air and completely clear the air in a matter o introduced. Amplification must be 360° capacity.
7. Lighting must be on rheostat control from control area.
8. Provide conduit terminations for media systems:

   Amplification

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
40	1	2,080	2,080

I. ENVIRONMENT				III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X	5	X		NA	NA	NA	X	6	X	NA	NA	NA	NA	NA	NA		7	NA	X	8

ts specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

as planitarium or curved projection surface.

ntire wall surface.

ned to accommodate the installation of a planitarium solar projection unit.

ne wall.

l instructional areas, accessible to outside area for emergency exit.

rojection units from all angles, film strip and film projectors. It must be possible the air and completely clear the air in a matter of 10 minutes once an odor has been on must be 360° capacity.

stat control from control area.

tions for media systems:

SPACE	UNIT CAP.	NO. UNITS	UNIT SI
LEARNING EXPERIENCES CENTER Environmental Area	5	1	250

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MED			
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V
X	1	NA	X		X	X	2	X		NA	NA	NA	X	3	NA	X	X	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to Ge

EXCEPTIONS

1. Wall must not separate control from main area.
2. Relate directly to main environmental area.
3. Area must house central control console for all lighting, ventilating, projec systems.
4. Provide conduit terminations for media systems:

TV	COM/TLM
CAI/CBI	RAS

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
ES CENTER	5	1	250	250

	II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	X	X	2	X		NA	NA	NA	X	3	NA	X	X	X	NA	X	X		X	X	X	4

l Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

eparate control from main area.

to main environmental area.

central control console for all lighting, ventilating, projection and amplification

terminations for media systems:

COM/TLM
RAS

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT.
CRAFT AREA	8-10	1	1,400

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM
1	2	X	3		X	X	4	X		X	5	X	X		X	X	X	X	NA	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirem

EXCEPTIONS

1. Ceiling minimum clear span 12'.
2. Long term adaptability with easily cleaned surface.
3. Resilient tile or other surface of like material.
4. Relate to intermediate and/or advanced instructional areas.
5. Student stations will include many varied activity centers including work, letter pres metal work. Work surfaces and machinery will need to be specified at the time of prog
6. Provide conduit terminations for media systems:

Amplification	CAI/CBI	RAS
TV	COM/TLM	

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
8-10	1	1,400	1,400

II. ENVIRONMENT				III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X	4	X		X	5	X	X		X	X	X	X	NA	X	X		X	X	X	6

nts specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

pan 12'.

with easily cleaned surface.

surface of like material.

nd/or advanced instructional areas.

clude many varied activity centers including work, letter press, plastics,
es and machinery will need to be specified at the time of program identification.

ions for media systems:

AI/CBI RAS
OM/TLM

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT.
HOME ECONOMICS	8-10	1	1,400

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM
X	X	X	X		X	X	1	X	2	X	3	X	4		X	X	X	X	NA	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirem

EXCEPTIONS

1. Relate to intermediate or advanced instructional area.
2. Zone area for design and serving and for food preparation and home related activities and dining room.
3. Provide 1 four-place domestic type kitchen unit with formica "hot-top" counter and wal cabinets above. Install 1 commercial range and bake oven arrangement. Furnish 4 serving stations using space-saver tables. Provide laundry unit.
4. Provide portable storage.
5. Install 220 volt service.
6. Install water connections and ventilation hoods at kitchen unit.
7. Provide conduit terminations for media systems:

Amplification	CAI/CBI	RAS
TV	COM/TLM	

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
8-10	1	1,400	1,400

II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X	X	1	X	2	X	3	X	4		X	X	X	X	NA	X	X		5	6	X	7

rements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

te or advanced instructional area.

and serving and for food preparation and home related activities such as living

domestic type kitchen unit with formica "hot-top" counter and wall/ceiling hung
tall 1 commercial range and bake oven arrangement.
ations using space-saver tables. Provide laundry unit.

rage.

vice.

tions and ventilation hoods at kitchen unit.

inations for media systems:

CAI/CBI RAS
COM/TLM

B

CHILDRENS' EDUCATIONAL EVALUATION CENTER

OFFICES
CONFERENCE AREAS
RESEARCH AREA
PROFESSIONAL LIBRARY

CONCEPTUAL PLAN

Every child, upon entering the region, shall be evaluated and an educational p

This Center will serve as the focal point, within the region, for major diagno workups as well as re-evaluations. Additionally, the research program for the within the Center for a wide variety of activities. Hearing conservation prog communication training for parents and very young children will be conducted i

The staff of the Center will include:

Audiologist and an Audiological Assistant
Psychologists
Child Development Specialist
Teachers of Hearing Impaired
Teacher of the Deaf
Consulting Psychiatrist
Vision Screener
Parent-Infant Educators
Social Worker
Nurse

FACILITY IMPLICATIONS

- The Center may be a central part of the educational facility for the regio If more than one educational facility is necessary for the region than the as to serve the population of the region most conveniently.
- Space within the Center will be composed of two major items: office areas and research facilities that will include larger conference or work space; for housing research equipment.
- If the Center is planned in conjunction with an educational building, the D should have his office area located adjacent to the CEEC.

entering the region, shall be evaluated and an educational program developed for him.

erve as the focal point, within the region, for major diagnostic and evaluation
re-evaluations. Additionally, the research program for the region will have areas
for a wide variety of activities. Hearing conservation program planning, and
ning for parents and very young children will be conducted in the Center.

enter will include:

d an Audiological Assistant

ent Specialist
aring Impaired
Deaf
chiatrist
r
Educators

ONS

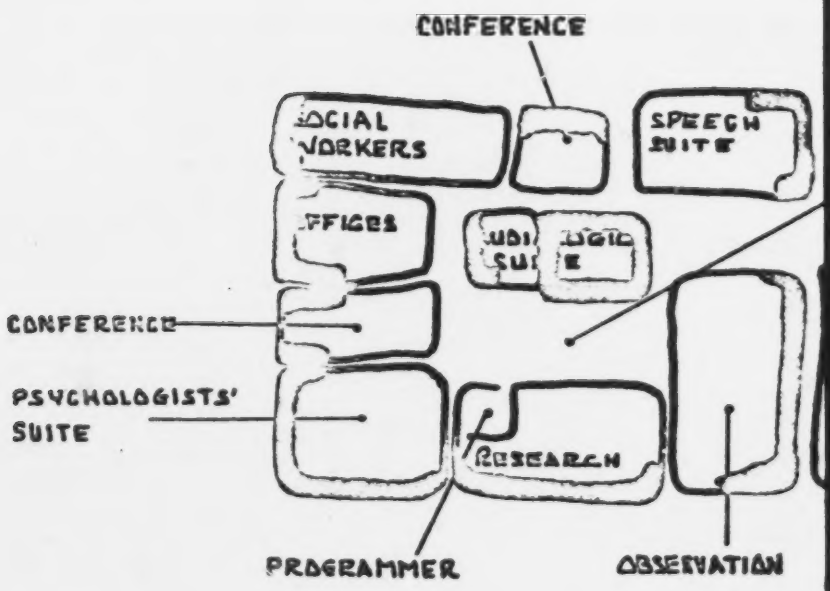
be a central part of the educational facility for the region if it can be so designed.
ne educational facility is necessary for the region than the CEEC should be so located
e population of the region most conveniently.

ne Center will be composed of two major items: office areas with conference space
acilities that will include larger conference or work space; and a "hardware" area
search equipment.

is planned in conjunction with an educational building, the Director of the program
; office area located adjacent to the CEEC.

AREA COMPONENTS	SQUARE FOOTAGE ALLOCATIONS
CHILDRENS' EDUCATIONAL EVALUATION CENTER	
1) Audiologist's Office	100
2) Audiological Assistant's Office	75
3) Audiological Testing Area	200
4) Psychologist's (Coordinator's) Office	100
5) Psychologist's Offices	100
6) Interns' Offices	50
7) Conference Area	200
8) General Offices	525
9) Consulting Psychiatrist	100
10) Consultant's Office	150
11) Speech and Aural Rehabilitation Room	100
12) Speech Diagnosis Area	100
13) Social Workers Office	75
14) Conference Area	200
15) Research Area	
Programmer	120
Equipment	400
16) Observation	600
17) Professional Library	400

SCHEMATIC CHILDRENS' EDUCATION



ATIC CHILDRENS' EDUCATIONAL EVALUATION CENTER.

NOTE: This drawing is intended to demonstrate relationships between spaces and is schematic only. True proportion has not been observed, and shapes are not intended to represent desired design.

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT.
AUDIOLOGIST'S OFFICE	1-3	1	100

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM
X	1	NA	X		X	X	2	X		X	X	X	X		NA	NA	NA	X	NA	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirem

EXCEPTIONS

1. Minimum attenuation factor of 48.
2. Relate directly to testing area.
3. Install conduit terminations for media system:

   COM/TLM
   RAS

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
1-3	1	100	100

VIRONMENT			III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
2	X		X	X	X	X		NA	NA	NA	X	NA	X	X		X	NA	X	3

cified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

of 48.

area.

s for media system:

SPACE

AUDIOLOGICAL ASSISTANT'S OFFICE

UNIT CAP. 1-3

NO. UNITS 1

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV.
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI
X	1	NA	X		X	X	2	X		X	X	X	X		NA	NA	NA

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to

EXCEPTIONS

1. Minimum sound attenuation factor.
2. Relate directly to testing area.
3. Provide conduit terminations for media systems:

   COM/TLM
   RAS

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
OFFICE	1-3	1	75	75

II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	X	2	X		X	X	X	X		NA	NA	NA	X	NA	X	X		X	NA	X	3

ments specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

ion factor.

ting area.

ations for media systems:

SPACE

AUDIOLOGICAL TESTING AREA

UNIT CAP. 16 | NO. UNITS 1 | UNIT SQ. FT. 200

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYST					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	
X	X	1	X	2	X	3	4	X		X	X	X	X		NA	NA	NA	X	NA	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Req

EXCEPTIONS

1. Window from testing area to sound control area.
2. Sound proof booths provide the best possible arrangement for this area.
3. Extremely important that every effort to provide a sound proof area be made.
4. Relate directly to the audiometric console.
5. Independent audiometer installation.
6. All mechanical systems, including air exhaust must be designed with a minimum of sou

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
16	1	200	200

UMENT		III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X		X	X	X	X		NA	NA	NA	X	NA	NA	NA	5	X	NA	6	

pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

nd control area.

best possible arrangement for this area.

effort to provide a sound proof area be made.

ic console.

tion.

g air exhaust must be designed with a minimum of sound generation.

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. F
PSYCHOLOGIST'S OFFICE	1-3	1	100

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA S				
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	
X	X	1	X		X	X	2	X		X	X	X	X		NA	NA	NA	X	N

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General

EXCEPTIONS

1. Partial window wall related to conference or reception area.
2. Relate to public reception, administration and psychological suite.
3. Provide conduit terminations for media systems:

   COM/TLM
   RAS

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
1-3	1	100	100

	II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	X	X	2	X		X	X	X	X		NA	NA	NA	X	NA	X	X		X	NA	X	3

equirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

l related to conference or reception area.

eception, administration and psychological suite.

rminations for media systems:

SPACE

PSYCHOLOGISTS' OFFICES

UNIT CAP.	NO. UNITS	UNIT SQ. FT.
3	2	100

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM
X	X	1	X		X	X	2	X		X	X	X	X		NA	NA	NA	X	NA	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Require

EXCEPTIONS

1. Partial window wall related to conference or reception area.

2. Relate to conference area. Avoid cross traffic with administrative office area. Provide direct access to student traffic ways.

3. Provide conduit terminations for media systems:

   COM/TLM
   RAS

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
3	2	100	200

VIRONMENT			III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
2	X		X	X	X	X		NA	NA	NA	X	NA	X	X		X	NA	X	3

cified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

to conference or reception area.

Avoid cross traffic with administrative office area.
dent traffic ways.

for media systems:

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT.
INTERNS' OFFICE	1	3	50

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	
X	X	X	X		X	X	1	X		X	X	X	X		NA	X	NA	X	NA	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requir

EXCEPTIONS

1. Relate to conference area and psychologists area.
2. Provide conduit terminations for media systems:

   COM/TLM
   RAS

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
1	3	50	150

ENVIRONMENT				III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	1	X		X	X	X	X		NA	X	NA	X	NA	X	X		X	NA	X	2

specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

and psychologists area.

ons for media systems:

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. F
CONFERENCE AREA	10	1	200

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA S				
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	
X	X	X	X		X	X	1	2		X	X	X	X		NA	X	X	X	N

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General

EXCEPTIONS

1. Relate directly to Coordinator's office and other psychologists' offices.
2. Install chalkboard and pinboard surfaces in area.
3. Provide conduit terminations for media systems:

TV	COM/TLM
CAI/CBI	RAS

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
10	1	200	200

ENVIRONMENT				III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	1	2		X	X	X	X		NA	X	X	X	NA	X	X		X	NA	X	3

specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

nator's office and other psychologists' offices.

nboard surfaces in area.

ons for media systems:

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT.
OFFICES	1-2	7	75

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYST				
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC
X	1	X	X		X	X	2	3		X	X	X	X		NA	NA	NA	X	NA

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Req

EXCEPTIONS

1. Open area with visual dividers to establish semi-private areas for:
   1 child development specialist
   4 teachers of hearing impaired
   2 parent infant educators
2. Relate directly to student traffic ways.
3. Install chalkboard and pinboard surfaces.
4. Provide conduit terminations for media systems:

   COM/TLM
   RAS

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
1-2	7	75	525

	II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	X	X	2	3		X	X	X	X		NA	NA	NA	X	NA	X	X		X	NA	X	4

equirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

ual dividers to establish semi-private areas for:

nent specialist
earing impaired
educators

student traffic ways.

and pinboard surfaces.

minations for media systems:

SPACE

COUNSU.TING PSYCHIATRIST

UNIT CAP: 1-3

NO. UNITS: 1

UNIT SQ. FT.: 100

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYS				
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC
X	X	X	X		X	X	1	X		X	X	X	X		NA	NA	NA	X	NA

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Re

EXCEPTIONS

1. Relate directly to reception area.
2. Provide conduit terminations for media systems:

   RAS

UNIT CAP	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
1-3	1	100	100

I. ENVIRONMENT			III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
1	X		X	X	X	X		NA	NA	NA	X	NA	NA	X		X	NA	X	2

ied in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

area.

for media systems:

SPACE

CONSULTANT'S OFFICE

UNIT NO. 1-3

NO. UNITS 1

UNIT SQ. FT. 150

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYST					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	
X	X	X	X		X	X	L	X		X	X	X	X		X	X	NA	X	NA	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Req

EXCEPTIONS

1. Relate to reception area.
2. Install sink with hot and cold water.
3. Provide conduit terminations for media systems:

   TV
   COM/TLM
   RAS

UNIT TYPE	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
T-3	1	150	150

II. ENVIRONMENT				III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X	L	X		X	X	X	X		X	X	NA	X	NA	X	X		X	2	X	3

ts specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

.

d cold water.

ions for media systems:

SPACE	UNIT CAP	NO. UNITS	UNIT SQ. FT.
SPEECH AND AURAL REHABILITATION ROOM	3	1	100

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEM					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	
X	X	X	X		X	1	2	X		X	X	X	X		X	X	X	X	NA	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requir

EXCEPTIONS

1. Sound proof this area.
2. Relate directly to observation area. Direct access to student traffic ways.
3. Provide conduit terminations for media systems:

   Amplification CAI/CBI RAS
   TV COM/TLM

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
N ROOM	3	1	100	100

VIRONMENT			III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
2	X		X	X	X	X		X	X	X	X	NA	X	X		X	NA	X	3

cified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

ion area. Direct access to student traffic ways.

s for media systems:

BI RAS
LM

SPACE

SPEECH DIAGNOSIS AREA

UNIT CAP.	NO. UNITS	UNIT SQ.
3	1	100

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA				
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	
X	X	X	X		X	1	2	X		X	X	X	X		X	X	NA	X	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to Gener

EXCEPTIONS

1. Sound proof area.
2. Relate directly to the speech and aural room with direct access from student tra
3. Provide conduit terminations for media systems:

   Amplification RAS
   TV

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
3	1	100	100

II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X	1	2	X		X	X	X	X		X	X	NA	X	NA	NA	X		X	NA	X	3

quirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

the speech and aural room with direct access from student traffic ways.

inations for media systems:

RAS

SPACE	UNIT CAP	NO. UNITS	UNI
SOCIAL WORKER'S OFFICE	3	3	

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV M			
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	
X	1	X	X		X	X	2	3		X	X	X	X		NA	NA	NA	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to

EXCEPTIONS

1. Open area with visual dividers to establish semi-private office space.

2. Relate directly to general office and reception areas.
   Provide direct access to outside walkways and internal traffic.

3. Provide conduit terminations for media systems:

   COM/TLM
   RAS

UNIT CAP	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
3	3	75	225

I. ENVIRONMENT				III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X	2	3		X	X	X	X		NA	NA	NA	X	NA	X	X		X	NA	X	4

specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

ders to establish semi-private office space.

office and reception areas.
utside walkways and internal traffic.

ns for media systems:

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT.
CONFERENCE AREA	10	1	200

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM
X	X	X	X		X	X	1	2		X	X	X	X		NA	X	X	X	NA	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Require

EXCEPTIONS

1. Relate directly to social workers' offices.
2. Install chalkboard and pinboard surfaces in area.
3. Provide conduit terminations for media systems:

   TV
   CAI/CBI
   COM/TLM
   RAS

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
10	1	200	200

		II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
		X	X	1	2		X	X	X	X		NA	X	X	X	NA	X	X		X	NA	X	3

General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

ly to social workers' offices.

board and pinboard surfaces in area.

t terminations for media systems:

COM/TLM
RAS

SPACE

PROGRAMMER WORK AREA

UNIT CAP. 1-2

NO. UNITS 1

UNIT SQ. FT. 120

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTE					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	
X	X	1	X		X	X	2	X		X	X	3	X		NA	NA	X	X	NA	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requ

EXCEPTIONS

1. Provide visual access from programmer area to equipment area.
2. Relate directly to equipment area.
3. Provide layout table for program planning.
4. Provide conduit terminations for media systems:

   CAI/CBI RAS
   COM/TLM

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
1-2	1	120	120

I. ENVIRONMENT			III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
2	X		X	X	3	X		NA	NA	X	X	NA	X	X		X	NA	X	4

cified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

programmer area to equipment area.

t area.

ogram planning.

s for media systems:

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT.
RESEARCH EQUIPMENT AREA	10	1	400

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS						
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	
X	X	1	X	2	3	4	5	X		X	X	X	X		X	X	X	X	NA	X	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirement

EXCEPTIONS

1. Visual access from programmer area and observation area.
2. Design a false floor, with access holes, for ease of cable installation and movement of
3. Temperature control 40° to 75°. Humidity control 40% to 80%.
4. Treat for sound control, minimum sound level.
5. Relate to programmers area.
   Relate to observation area.
   Provide outside access.
6. Minimum 140 foot candles of light with no more than a 10/1 brightness ratio on the ceili
   Provide 110/220 volt service.
7. Provide conduit terminations for media systems:

   Amplification CAI/CBI RAS
   TV COM/TLM

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
AREA	10	1	400	400

	II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
2	3	4	5	X		X	X	X	X		X	X	X	X	NA	X	X		6	X	X	7

al Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

rom programmer area and observation area.

floor, with access holes, for ease of cable installation and movement of equipment.

trol 40° to 75°. Humidity control 40% to 80%.

control, minimum sound level.

ammers area.
vation area.
access.

candles of light with no more than a 10/1 brightness ratio on the ceiling.
volt service.

terminations for media systems:

CAI/CBI RAS
COM/TLM

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. F
OBSERVATION/CONFERENCE AREA	25	1	600

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA S				
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	
X	1	2	X		X	X	3	4		X	X	X	X		X	X	NA	X	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General

EXCEPTIO S

1. Sound control required.
2. One-way mirror between observation and research area.
3. Relate directly to research area and general reception.
4. Provide drapes over mirror glass.
5. Install media system terminations for:

Amplification	A/V	RAS
TV	COM/TLM	

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
	25	1	600	600

II. ENVIRONMENT				III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X	3	4		X	X	X	X		X	X	NA	X	NA	X	X		X	NA	X	5

nts specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

observation and research area.

arch area and general reception.

ror glass.

rminations for:

RAS

/TLM

SPACE	UNIT CAP.	NO. UNITS	U
PROFESSIONAL LIBRARY	10-12	1	

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV.		
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI
X	X	X	X		X	X	1	X		X	X	2	X		NA	NA	NA

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions

EXCEPTIONS

1. Relate to office areas.
2. Provide study tables, book shelves and reference area.
3. Provide conduit terminations for media systems:

   COM/TLM
   RAS

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
10-12	1	400	400

II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X	X	1	X		X	X	2	X		NA	NA	NA	X	NA	X	X		X	NA	X	3

quirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

reas.

es, book shelves and reference area.

rminations for media systems:

C

ADMINISTRATION AREA

OFFICE-CONFERENCE
SECRETARY/RECEPTION

C

ADMINISTRATION AREA

CONCEPTUAL PLAN

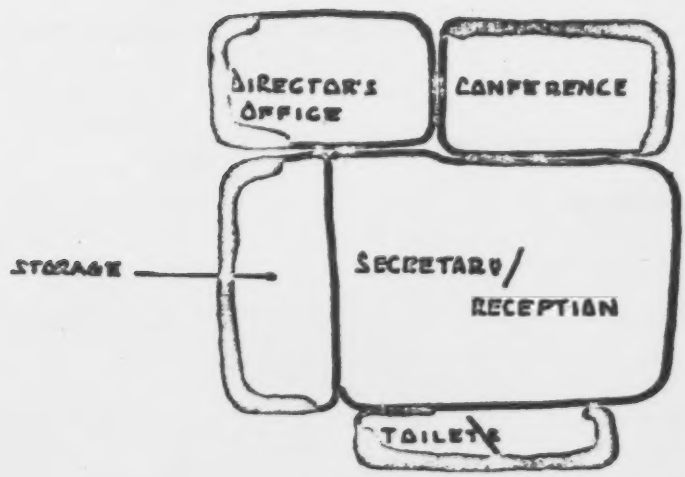
It is imperative that an administrative unit be designed specifically for the Director of the regional program. However, it is equally imperative that a close working relationship exist with the staff of CEEC and with the faculty of the educational facility, therefore, all units should share a common structure if at all possible.

FACILITY IMPLICATIONS

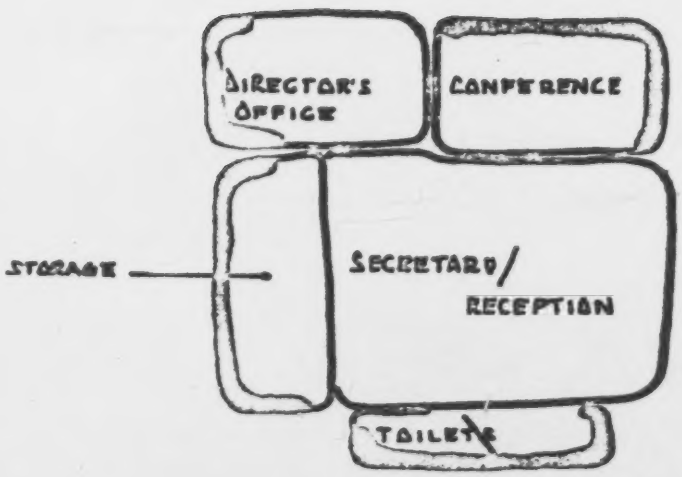
- The administrative unit should be designed in such a way to provide a common reception area for the educational unit, CEEC and the Director's area.
- In addition to the Director's office, conference area, secretarial area and storage room are required. Entry to the facility should be into a reception area, with office and secretarial area nearby.
- The Director's office should open directly into the Conference area by using a folding wall. The toilet facilities should be near but not a part of the office space, so use of the facilities may be made by more than just the Director and his staff.

AREA COMPONENTS	SQUARE FOOTAGE ALLOCATION
ADMINISTRATIVE UNIT	
1) Director's Office	150
2) Conference	200
3) Secretary	120
4) Reception	150
5) Storage	200
6) Toilets	100

SCHEMATIC


DIRECTOR'S OFFICE
CONFERENCE
STORAGE
SECRETARY/ RECEPTION
TOILET

C ADMINISTRATION AREA



NOTE: This drawing is intended to demonstrate relationships between spaces and is schematic only. True proportion has not been observed, and shapes are not intended to represent desired design.

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT.
DIRECTOR'S OFFICE	1 - 3	1	150

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTE					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	
X	X	X	X		X	X	1	X		X	X	X	X		NA	X	NA	X	NA	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requ

EXCEPTIONS

1. Relate directly to the reception area and conference area.
2. Provide conduit termination for media systems.

   TV RAS
   COM/TLM

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
1 - 3	1	150	150

VIRONMENT			III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
1	X		X	X	X	X		NA	X	NA	X	NA	X	X		X	NA	X	2

cified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

eption area and conference area.

n for media systems.

SPACE	UNIT CAP.	NO. UNITS	UNIT S
CONFERENCE	10-12	1	200

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MED			
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V
X	1	X	X		X	X	2	X		X	X	X	X		X	X	NA	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to Ge

EXCEPTIONS

1. Install folding wall between director's office and conference room.
2. Relate directly to the director's office.
3. Provide conduit terminations for media systems:

Amplification	COM/TLM
TV	RAS

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
10-12	1	200	200

	II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	X	X	2	X		X	X	X	X		X	X	NA	X	NA	X	X		X	NA	X	3

Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

ll between director's office and conference room.

the director's office.

rminations for media systems:

COM/TLM
RAS

SPACE

SECRETARY

UNIT CAP.	NO. UNITS
1	1

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV			
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	
X	X	NA	X		X	X	1	X		X	NA	X	X		NA	NA	NA	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions

EXCEPTIONS

1. Relate to reception area. Open space.
2. Provide conduit termination for media systems:

   COM/TLM
   RAS

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
1	1	120	120

RONMENT			III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
1	X		X	NA	X	X		NA	NA	NA	NA	NA	X	X		X	NA	X	2

ed in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

en space.

or media systems:

SPACE

RECEPTION

UNIT CAP.	NO. UNITS	UNIT SQ. FT.
-	1	150

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYS				
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC
X	NA	NA	X		X	X	1	X		X	X	X	NA		NA	NA	NA	NA	NA

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Re

EXCEPTIONS

1. Relate to outside open area without interior walls separating the secretary from r
2. Install drinking fountain.

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
-	1	150	150

	II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	X	X	1	X		X	X	X	NA		NA	NA	NA	NA	NA	NA	NA		X	2	X	

Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

open area without interior walls separating the secretary from reception.

ountain.

SPACE

STORAGE

UNIT CAP. -

NO UNITS 1

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV		
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI
X	X	NA	X		X	X	1	X		X	NA	NA	X		NA	NA	NA

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions.

EXCEPTIONS

1. Relate directly to secretarial area.
2. Install sink with hot and cold water.

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
-	1	200	200

II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	X	1	X		X	NA	NA	X		NA	NA	NA	NA	NA	NA	NA		X	2	X	

ments specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

retarial area.

and cold water.

SPACE

TOILETS

UNIT CAP	NO. UNITS	UNIT SQ. F
1-2	2	50

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA S				
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	
X	X	X	X		X	X	1	X		X	NA	NA	NA		NA	NA	NA	NA	NA

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 NA = Not Applicable. Numbers refer to exceptions to General R

EXCEPTIONS

1. Relate to administration unit. One toilet for each men and women accessible to v administrative staff.

2. Install one sink and one toilet in each unit.

UNIT CAP	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
1-2	2	50	100

	II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	X	X	1	X		X	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA		X	2	X	

l Requirements specified in pages 25 to 44 NA = Not Applicable. Numbers refer to exceptions to General Requirements.

stration unit. One toilet for each men and women accessible to visitors as well as taff.

and one toilet in each unit.

D

LEARNING RESOURCES CENTER

LIBRARY
MULTI-MEDIA

CONCEPTUAL PLAN

LEARN

The importance of combining and integrating the materials of the instructional pr recordings, tapes, pictures, models, etc., - into a coordinated program of resour to students and staff alike has brought about a new dimension to the school calle Center. The largest portion of the Center is still devoted to the circulating ar and other library services; however, additional areas are identified for special seminar, carrels and conference. A conference room and study carrels provide are and for use of the library reference materials.

The Center should be the focal point for the location of all resources. While pr dissemination area, the concepts of library, multi-media, audio-visual storage an embodied. Utilization is planned for students and faculty.

The Multi-Media area will serve as the center of the complete electronic communic system. On request, audio and/or video materials will be provided to instruction school. Selective distribution will be accomplished through a multiplex intercom cated in each instructional and faculty area.

Although the center is considered as a unit, and operates as a unit, certain acti associated with the "library" section with others related to the "multi-media" se of this specification, areas of the Center are organized as follows: Library - R area, Staff processing area and workroom, Reference and Microfilm area. Multi- M Storage, Equipment Maintenance and Storage, Materials Preparation area and Dark R Shared areas - carrel area, control, typing area, seminar area, and offices.

FACILITY IMPLICATIONS

- The arrangement of the Media Center should be a functional design and include tive and colorful in appearance. The overall design of the Center should ref as a place for learning but also those aesthetic qualities that will invite s is essential that the Center have good lighting, acoustical control, heating a Temperature and humidity control is necessary for the proper preservation of f video and audio tapes, and other materials. There must be a sufficient numbe

D

AN

LEARNING RESOURCES CENTER

e of combining and integrating the materials of the instructional program - books, films, apes, pictures, models, etc., - into a coordinated program of resource supply and service nd staff alike has brought about a new dimension to the school called the Learning Resources largest portion of the Center is still devoted to the circulating and collection of books rary services; however, additional areas are identified for special functions; such as els and conference. A conference room and study carrels provide areas for independent study f the library reference materials.

ould be the focal point for the location of all resources. While primarily a reference and area, the concepts of library, multi-media, audio-visual storage and distribution are also ilization is planned for students and faculty.

ia area will serve as the center of the complete electronic communication and distribution equest, audio and/or video materials will be provided to instructional areas throughout the ctive distribution will be accomplished through a multiplex intercommunications receiver lo- instructional and faculty area.

center is considered as a unit, and operates as a unit, certain activities seem closely th the "library" section with others related to the "multi-media" section. For the convenience fication, areas of the Center are organized as follows: Library - Reading, Stacks, Periodical rocessing area and workroom, Reference and Microfilm area. Multi- Media - Media Information pment Maintenance and Storage, Materials Preparation area and Dark Room and Master Control Center. carrel area, control, typing area, seminar area, and offices.

CATIONS

ement of the Media Center should be a functional design and include decoration that is attrac- olorful in appearance. The overall design of the Center should reflect not only efficiency for learning but also those aesthetic qualities that will invite student and faculty use. It al that the Center have good lighting, acoustical control, heating and air-conditioning. e and humidity control is necessary for the proper preservation of films, transparencies, audio tapes, and other materials. There must be a sufficient number of electrical outlets

and also the necessary electrical power for average as well as peak loads. A te
needed in the office areas and possibly in other areas. There should be an inte
in the office area and elsewhere as indicated in detailed specifications. Light
outlets, power cords, thermostats, telephones, heat and smoke detection sensors,
are located where they do not use space needed for shelving. Electrical recepta
the floor as required.

- Although areas are identified specifically, i.e., carrel area, reference area, e
imply a closed room in most instances. Rather the units should be an open area
activities by dividers, such as bookshelves. Exceptions to this are in the typi
that do need to be closed to restrict sound.

- The library space should be open with stacks and cabinetry used to form specific
flexibility throughout the Center is required; electric and electronic connectio
greater adaptability in this space.

the necessary electrical power for average as well as peak loads. A telephone outlet is
the office areas and possibly in other areas. There should be an intercommunication outlet
fice area and elsewhere as indicated in detailed specifications. Light switches, electrical
power cords, thermostats, telephones, heat and smoke detection sensors, and fire extinguishers
ed where they do not use space needed for shelving. Electrical receptacles may be planned in
as required.

areas are identified specifically, i.e., carrel area, reference area, etc., this does not
losed room in most instances. Rather the units should be an open area zoned for these
by dividers, such as bookshelves. Exceptions to this are in the typing and seminar areas
eed to be closed to restrict sound.

y space should be open with stacks and cabinetry used to form specific areas. Considerable
y throughout the Center is required; electric and electronic connections should help to give
daptability in this space.

AREA COMPONENTS	SQUA

LIBRARY

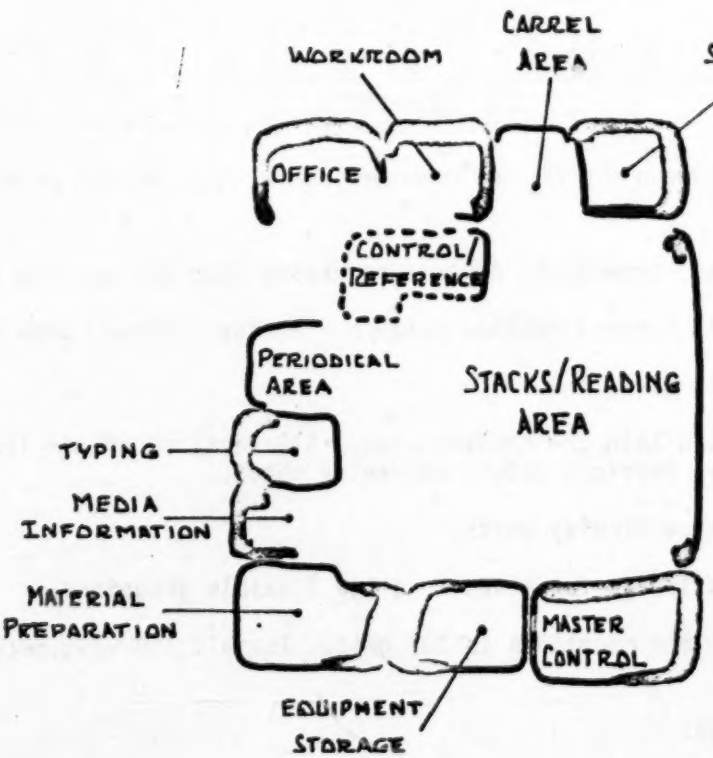
1. Stacks/Reading Area
2. Carrel Area
3. Reference/Microfilm Area
4. Periodical Area
5. Staff Processing Workroom
6. Staff Office
7. Control Area
8. Typing Area
9. Seminar Area

MULTI-MEDIA

1. Master Control Center
2. Equipment Maintenance and Storage
3. Materials Preparation Area
4. Media Information Storage

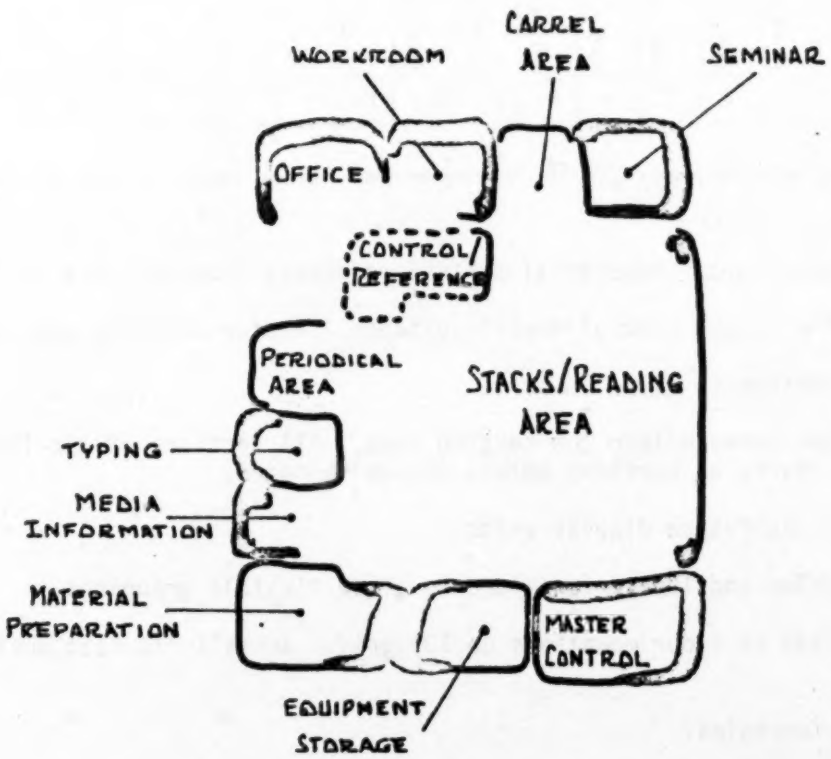
	SQUARE FOOTAGE ALLOCATION
ng Area	1,500
	450
crofilm Area	200
rea	150
sing Workroom	400
	150
	75
	200
	100
ol Center	500
intenance and Storage	200
eparation Area	800
ation Storage	150

SCHEMATIC — LEARNING RES



NOTE: This drawi
strate rela
and is sche
has not bee
not intend
design.

LEARNING RESOURCES CENTER



NOTE: This drawing is intended to demonstrate relationships between spaces and is schematic only. True proportion has not been observed, and shapes are not intended to represent desired design.

SPACE

STACKS/READING AREA
(Stacks - 500 sq ft; Reading - 1,000 sq ft)

UNIT CAP. 40-50

NO. UNITS 1

UN

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV.
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI
1	2	3	X		X	1	4	X		5	6	X	NA		X	X	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions t

EXCEPTIONS:

1. Minimum of 12' ceiling height. Acoustical control necessary from one zon
2. Exterior walls only for slight control traffic pattern. Prefer entirely
3. Install low light transference glass in wall.
4. Stacks utilized to form zones within the reading area. All sections of t loft concept and use stacks as barriers unless otherwise noted.
5. Provide tackboard and shelf-type display units.
6. Furnish with study tables and lounge furniture to allow flexible grouping
7. Install 110 volt outlets in floor mountings on 10' grid. Install 110 vol control point.
8. Install two drinking fountains.
9. Provide conduit terminations for media systems:

Amplification	CAI/CBI	RAS
TV	COM/TLM	

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
t; Reading - 1,000 sq ft)	40-50	1	1,500	1,500

	II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	X	1	4	X		5	6	X	NA		X	X	X	X	NA	X	X		7	8	X	9

al Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

ceiling height. Acoustical control necessary from one zone to another.

only for slight control traffic pattern. Prefer entirely open area to external circulation.

ght transference glass in wall.

d to form zones within the reading area. All sections of the library are part of open
nd use stacks as barriers unless otherwise noted.

ard and shelf-type display units.

tudy tables and lounge furniture to allow flexible groupings.

lt outlets in floor mountings on 10' grid. Install 110 volt outlets in floor mounting at

inking fountains.

t terminations for media systems:

on CAI/CBI RAS
COM/TLM

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ.
CARREL AREA	25	1	450

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA				
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	
X	1	X	X		X	X	2	X		X	3,4	X	NA		X	3	4	X	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to Gene

EXCEPTIONS:

1. Long-te.m walls.
2. Direct access to stacks and reading area.
3. One-half carrels should be equipped with TV monitor and audio headset, connec System with RAS available.
4. One-half carrels should be terminals for CAI with CRT display and keyboard co
5. Install 110 volt outlets in floor mounting at each carrel.
6. Provide conduit terminations for media systems:

Amplification	CAI/CBI	
TV	COM/TLM	RAS

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
25	1	450	450

II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X	X	2	X		X	3,4	X	NA		X	3	4	X	NA	X	X		5	NA	X	6

quirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

stacks and reading area.

should be equipped with TV monitor and audio headset, connected to MC by Intercom
vailable.

should be terminals for CAI with CRT display and keyboard control.

outlets in floor mounting at each carrel.

terminations for media systems:

CAI/CBI
COM/TLM RAS

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT
REFERENCE/MICROFILM AREA	5	1	200

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA S				
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	
1	2	X	X		3	1	4,5	X		X	6	X	7		X	NA	NA	X	N

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to Genera

EXCEPTIONS:

1. Design for good acoustical control, including acoustical type ceiling.
2. No interior walls.
3. Temperature and humidity control necessary for storage of microfilm.
4. Relate directly to control area and office. Directly accessible to reading an
5. Open area. Stacks providing zone for reference area.
6. Furnish with lounge furniture and study tables.
7. Provide section for microfiche readers and storage of microfiche film.
8. Provide conduit terminations for media systems:

   Amplification
   COM/TLM

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
FILM AREA	5	1	200	200

	II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	3	1	4,5	X		X	6	X	7		X	NA	NA	X	NA	X	NA		X	NA	X	8

neral Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

ood acoustical control, including acoustical type ceiling.

walls.

and humidity control necessary for storage of microfilm.

tly to control area and office. Directly accessible to reading and typing areas.

Stacks providing zone for reference area.

lounge furniture and study tables.

ion for microfiche readers and storage of microfiche film.

uit terminations for media systems:

n

SPACE

PERIODICAL AREA

UNIT CAP. 5

NO. UNITS 1

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT						
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV
X	1	X	X		X	X	2	X		X	X	X	NA		X	NA

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exc

EXCEPTIONS:

1. Open area. Sepration from main reading area by stacks or partial vi
2. Relate directly to reading and stacks area.
3. Design for capability of installation of electronic data retrieval s conduit terminations for media systems:

Amplification	COM/TLM
CAI/CBI	RAS

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
AREA	5	1	150	150

CTURE			II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	X		X	X	2	X		X	X	X	NA		X	NA	X	X	NA	X	X		X	NA	X	3

ON to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

:

rea. Sepration from main reading area by stacks or partial visual dividers.

directly to reading and stacks area.

for capability of installation of electronic data retrieval system at future date. Provide
t terminations for media systems:

ication	COM/TLM
I	RAS

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. F
STAFF PROCESSING WORKROOM		1	400

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA S				
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	
X	1	X	2		X	X	3,4	X		X	NA	NA	5		NA	NA	NA	NA	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to Genera

EXCEPTIONS:

1. Enclosed area with visual access.
2. Resilient floor covering.
3. Relate directly to offices.
4. External access or access to freight elevator, necessary for receiving books.
5. Install cabinets for storage and stacks for back up book storage.
6. Install 110 volt duplex outlets above work counters.
7. Install sink with hot and cold water in counter. Provide storage space beneat
8. Provide conduit terminations for media systems:

   COM/TLM

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
	1	400	400

ENVIRONMENT				III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	3,4	X		X	NA	NA	5		NA	NA	NA	NA	NA	X	NA		6	7	X	8

specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

al access.

g.

ces.

ss to freight elevator, necessary for receiving books.

orage and stacks for back up book storage.

outlets above work counters.

nd cold water in counter. Provide storage space beneath sink.

tions for media systems:

SPACE	UNIT CAP.	NO. UNITS
STAFF OFFICE	2	1

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT							
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	
1	2	2	X		X	3	4	X		X	NA	X	2		NA	X	N

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to excep

EXCEPTIONS:

1. Acoustically treat ceilings.
2. Offices should be defined by the use of movable storage and furniture between reading/stack area and office.
3. Acoustical control should be given careful consideration to provide a
4. Relate directly to reading and stack areas, to control area, and mast
5. Provide conduit terminations for media systems:

   TV
   COM/TLM

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
ICE	2	1	150	150

CTURE			II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
2	X		X	3	4	X		X	NA	X	2		NA	X	NA	X	NA	X	NA		X	NA	NA	5

ION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

S:

tically treat ceilings.

es should be defined by the use of movable storage and furniture. Partial visual wall, use of glass en reading/stack area and office.

tical control should be given careful consideration to provide as much privacy as possible.

e directly to reading and stack areas, to control area, and master control center.

le conduit terminations for media systems:

I/TLM

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT.
CONTROL AREA	-	1	75

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM
X	1	X	X		X	X	2	X		X	NA	X	NA		NA	X	NA	X	NA	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirem

EXCEPTIONS

1. Open area defined by check out counter system.
2. Locate in circulation pattern. Relate to stacks and reading areas and office.
3. Install electronic capability for future installation of computer terminal.
4. Install local intercom system for control to office and workroom.
5. Install 110 volt outlets in floor mounting, at work station; minimum of four units.
6. Provide conduit terminations for media systems:

   TV
   COM/TLM

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
-	1	75	75

II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	X	2	X		X	NA	X	NA		NA	X	NA	X	NA	X	NA	3,4	5	NA	X	6

nents specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

heck out counter system.

pattern. Relate to stacks and reading areas and office.

ability for future installation of computer terminal.

system for control to office and workroom.

ts in floor mounting, at work station; minimum of four units.

ations for media systems:

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT.
TYPING AREA	10	1	200

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTE					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	
X	1	2	X		X	3	4	X		X	X	NA	5		NA	NA	NA	X	NA	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Req

EXCEPTIONS:

1. Long-term wall.
2. Visual access from stacks and reading area.
3. Provide acoustical security from other areas.
4. Relate directly to stacks and reading areas. Adjacent to offices.
5. Provide storage for typing supplies.
6. Install 110 volt outlets in floor mountings. Space at 10' intervals or at all ty

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
10	1	200	200

	II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	X	3	4	X		X	X	NA	5		NA	NA	NA	X	NA	NA	NA		6	NA	X	

eneral Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

all.

ss from stacks and reading area.

ustical security from other areas.

ctly to stacks and reading areas. Adjacent to offices.

rage for typing supplies.

volt outlets in floor mountings. Space at 10' intervals or at all typing stations.

SPACE	UNIT CAP.	NO. UNITS
SEMINAR AREA	5	1

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT							
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	
X	1	X	X		X	2	3	X		4	5	NA	NA		X	6	N

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptio

EXCEPTIONS:

1. Partially enclosed area.
2. Provide acoustical separation by use of carpeting and acoustical type
3. Direct access to stacks/reading area.
4. Design for pinboard/chalkboard surface on two walls of each area.
5. Furnish with lounge furniture or conference table.
6. Ceiling mount for TV monitor.
7. Install 110 volt outlets in floor mountings.
8. Provide conduit terminations for media systems:

Amplification	COM/TLM
TV	RAS

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
5	1	100	100

E		II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X		X	2	3	X		4	5	NA	NA		X	6	NA	X	NA	X	X		7	NA	X	8

o General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

enclosed area.

coustical separation by use of carpeting and acoustical type ceiling.

cess to stacks/reading area.

r pinboard/chalkboard surface on two walls of each area.

ith lounge furniture or conference table.

ount for TV monitor.

0 volt outlets in floor mountings.

onduit terminations for media systems:

tion COM/TLM
RAS

SPACE	UNIT CAP.	NO. UNITS
MASTER CONTROL CENTER	2-4	1

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio
X	1	NA	2		3	4	5	NA		NA	NA	X	X	6	NA

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refe

EXCEPTIONS:

1. Enclosed area for security of equipment and materials.
2. Consider the use of raised floor as an air input plenum for coo
3. This space will require full air conditioning to remove heat di humidity that could damage the proper physical characteristics
4. Acoustically treat wall and ceiling surfaces to help dampen mac generated in this room.
5. Locate this entire space near a loading dock or ramp to facilit consoles, equipment racks and system components. Relate to Equ
6. This space will house standard 19" wide EIA (Electronic Industr these racks will allow air and power services to be brought in mounted telephone. Provide 40" deep work counter, 33" high.
7. All afferent and efferent television, audio, control and data s in this space. The majority of all media, signal-source equipm

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
TROL CENTER	2-4	1	500	500

TURE			II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
A	2		3	4	5	NA		NA	NA	X	X	6	NA	X	X	X	NA	X	X	7	8	NA	X	9

ON to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

:

ed area for security of equipment and materials.

er the use of raised floor as an air input plenum for cooling equipment racks.

pace will require full air conditioning to remove heat dissipated by electronic equipment and excess ty that could damage the proper physical characteristics of video tape.

ically treat wall and ceiling surfaces to help dampen machine and equipment noise that will be ted in this room.

this entire space near a loading dock or ramp to facilitate the shipping and receiving of heavy es, equipment racks and system components. Relate to Equipment Maintenance and Storage and offices.

pace will house standard 19" wide EIA (Electronic Industries Association) equipment racks. Most of racks will allow air and power services to be brought in through the bottom panel. Provide wall d telephone. Provide 40" deep work counter, 33" high.

ferent and efferent television, audio, control and data signals will be switched, routed, and processed s space. The majority of all media, signal-source equipment will also be housed in this area.

MASTER CONTROL CENTER (continued)

EXCEPTIONS:

8. Bring 115 volt ac single phase power into this space under raised floor in addition to walls. Use service raisers in floor for duplex outlets, spaced on 4' centers. Provide 20 amp breakers for each duplex outlet mounted in floor. Provide 100' candle lighting in this entire area. Use at least three circuits so that excess ambient light can be controlled in various regions of this room (for film chains, etc.) Locate four 115 volt as single phase duplex receptacles 4-6 inches above work surface on wall. The work counter will be used to service electronic equipment.

9. Conduits, ducts, and carriers from all areas of the building will terminate in this space.

10. Provide conduit terminations for media systems:

TV	COM/TLM
CAI/CBI	RAS

SPACE

EQUIPMENT MAINTENANCE & STORAGE

UNIT CAP. -

NO. UNITS 1

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT						
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV
X	1,2	NA	3	4,5	X	6	7	X		8	X	X	9		NA	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to ex

EXCEPTIONS:

1. Enclosed space for security of stored equipment.
2. Double door entry, 6' wide into master control.
3. Resilient floor covering.
4. Provide area for check-out and return of equipment.
5. Zone area for technician.
6. Acoustical isolation necessary.
7. Relate to preparation area. Relate to control and distribution. A offices.
8. Floor to ceiling chalkboard (6 linear feet) and tackboard (6 linear
9. Storage cabinets and storage bins. Adjustable floor to ceiling dou counter with knee space and storage below (30 linear feet).
10. Range of 80-100' candles of light at work surface. Auxiliary incan
11. Single phase duplex 120 volt ac outlets around permiter of room, sp
12. Provide conduit terminations for media systems:

TV
COM/TLM

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
CE & STORAGE	-	1	200	200

	II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
5	X	6	7	X		8	X	X	9		NA	X	NA	X	NA	X	NA		10 11	NA	X	12

Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

for security of stored equipment.

ry, 6' wide into master control.

covering.

r check-out and return of equipment.

echnician.

ation necessary.

ration area. Relate to control and distribution. Accessible to loading dock. Access to

g chalkboard (6 linear feet) and tackboard (6 linear feet).

s and storage bins. Adjustable floor to ceiling double-face shelving. Work and maintenance ee space and storage below (30 linear feet).

' candles of light at work surface. Auxiliary incandescent fixtures with SCR control.

plex 120 volt ac outlets around permiter of room, spaced on 5' centers.

terminations for media systems:

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ
MATERIALS PREPARATION AREA	-	1	80

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDI			
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V
X	1	2	3	4	5	6	7	X		8	NA	X	9	10	X	X	NA	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to Gen

EXCEPTIONS:

1. Enclosed area. Secured. Single point entrance and exit for darkroom. Provi main facility and darkroom. Room must be light tight.
2. Visual access to internal MC circulation.
3. Consider the use of a solution proof floor covering material such as epoxy. be satisfactory.
4. Include darkroom space, 100 sq feet. Zone space for duplication equipment.
5. Provide smoke and excess heat detection sensors.
6. Acoustical treatment for high ambient noise levels.
7. Relate directly to storage areas. Provide internal access as well as externa access to darkroom.
8. Provide minimum of two wall surfaces that can be used for optical projection 1/3 wall surfaces in both the production and darkroom facilities.
9. Provide adjustable shelving.
10. Provide darkroom with work counters with stainless steel drainboards and stai chemical resistant drain traps, under counter storage. Zone areas for copy c equipment, and refrigerator.

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
-	1	800	800

II. ENVIRONMENT				III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	7	X		8	NA	X	9	10	X	X	NA	X	NA	X	NA		11	12	X	13

specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

. Single point entrance and exit for darkroom. Provide light trap and door between oom. Room must be light tight.

al MC circulation.

olution proof floor covering material such as epoxy. Tile flooring materials will not

100 sq feet. Zone space for duplication equipment.

s heat detection sensors.

r high ambient noise levels.

ge areas. Provide internal access as well as external access. Direct

wall surfaces that can be used for optical projection. Wall to ceiling tackboard th the production and darkroom facilities.

ving.

ork counters with stainless steel drainboards and stainless steel sinks, with traps, under counter storage. Zone areas for copy camera, film processing ator.

MATERIALS PREPARATION AREA (continued)

EXCEPTIONS:

11. Shadow free lighting elements (80-100 ft candles) as measured at the task surfac
3 phase 60 amp circuit for dry copy machine. Install 115 volt ac single phase w
receptacles. Provide a warning light system with display over exterior door adj
Provide 115 volt ac single phase 40 amp service for arc lamp table (darkroom).
"safe" light system with controls mounted on interior walls. Audio/visual signa
to Central Control Room in MC. Darkroom power requirements: 8,000 watts, avera

12. Include floor drain in darkroom. Provide soft water service. Provide temperatu
and cold faucets. Provide refrigeration-type water chiller for one sink; provi
steel sinks in the darkroom.

13. Provide conduit terminations for media systems:

    Amplification COM/TLM
    TV

)N AREA (continued)

ıting elements (80-100 ft candles) as measured at the task surface. Provide 220 volt, circuit for dry copy machine. Install 115 volt ac single phase wall mounted duplex rovide a warning light system with display over exterior door adjoining production facility. t ac single phase 40 amp service for arc lamp table (darkroom). Install darkroom stem with controls mounted on interior walls. Audio/visual signal conduit (2"). Run rol Room in MC. Darkroom power requirements: 8,000 watts, average.

rain in darkroom. Provide soft water service. Provide temperature controls on hot . Provide refrigeration-type water chiller for one sink; provide hot water to stainless he darkroom.

terminations for media systems:

n COM/TLM

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ.
MEDIA INFORMATION STORAGE	-	1	150

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA			
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V
X	1	NA	2		3,4	X	5	X		NA	NA	X	6		NA	NA	NA	NA

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to Gene

EXCEPTIONS:

1. Enclosed area. Secured.
2. Resilient floor covering.
3. This space will require full air conditioning to remove heat and excess humi proper physical characteristics of magnetic tape.
4. Provide smoke and excess heat detection sensors.
5. Relate directly to preparation areas. External access to loading dock.
6. Movable storage compartments will be used.
7. Install sink with hot and cold water. Install in work counter.
8. Provide conduit terminations for media systems:

   COM/TLM

	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
TORAGE	-	1	150	150

	II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	3,4	X	5	X		NA	NA	X	6		NA	NA	NA	NA	NA	X	NA		X	7	X	8

Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

Secured.

covering.

require full air conditioning to remove heat and excess humidity that could damage the characteristics of magnetic tape.

nd excess heat detection sensors.

to preparation areas. External access to loading dock.

compartments will be used.

h hot and cold water. Install in work counter.

terminations for media systems:

SERVICE

STAFF LOUNGE
RECEPTION

E

SERVICE AREA

CONCEPTUAL PLAN

The service area includes the staff lounge and the public reception area. The lounge should include a food preparation area with kitchen appliances, and several food vending machines. A variety of seating arrangements should be possible. This area should provide teachers and staff with an area away from the children to have a "coffee" break, relax and eat lunch.

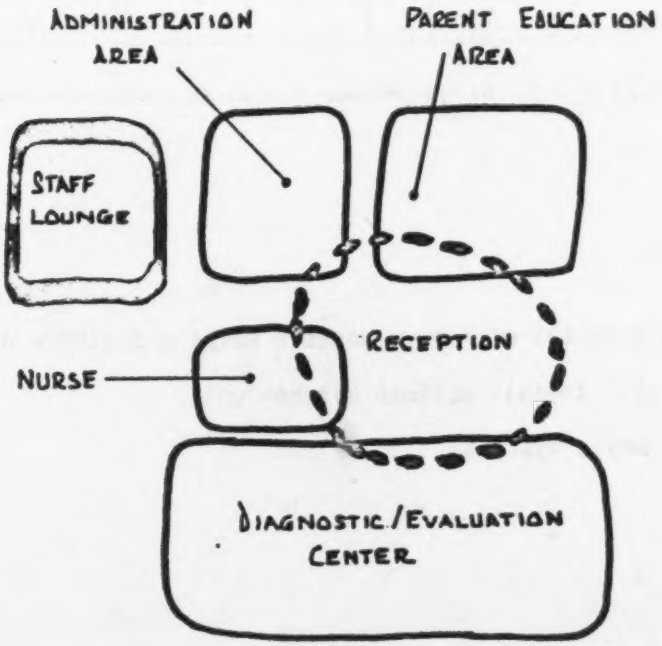
The public reception area will house the receptionist and general switchboard for the facility. Seating should be provided in the space as well as utilization for exhibitions of children's work.

FACILITY IMPLICATION

- The lounge should be centrally located within the facility to provide easy access to all staff and faculty. Provision needs to be made for control of smoke from the area entering instructional areas.
- Toilet and rest areas need to be designed as a part of this unit.
- The general reception area should be as inviting with as few physical barriers to visitors as possible.

AREA COMPONENTS	SQUARE FOOTAGE ALLOCATION
SERVICE AREA	
1) Staff Lounge	600
Toilets	350
2) Reception	300

SCHEMATIC — SERVICE AREA



NOTE: This drawing is intended to demonstrate relationships between spaces and is schematic only. True proportion has not been observed, and shapes are not intended to represent desired design.

SPACE	UNIT CAP.	NO. UNITS
STAFF LOUNGE	15-20	1

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT							
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	
X	1	2	X		X	X	3	X		X	NA	X	X		X	X	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exce

EXCEPTIONS

1. Long-term wall.
2. Exterior view desired.
3. Relate to general administrative area but within reasonable walking di
4. Install hot and cold water in sink. Install pullman kitchen unit.
5. Provide conduit terminations for media systems:

   TV RAS
   COM/TLM

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
15-20	1	600	600

II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
X	X	3	X		X	NA	X	X		X	X	NA	NA	NA	X	X		X	4	X	5

equirements specified in pages 25 to 44 . NA = Not Applicable. Numbers refer to exceptions to General Requirements.

red.

administrative area but within reasonable walking distance of instructional areas.

ld water in sink. Install pullman kitchen unit.

rminations for media systems:

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT.
TOILET (Mens')	2-3	1	100

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTE
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio
X	1	NA	2		X	X	3	X		X	NA	NA	NA		NA

TV	CAI/CBI	A/V	IC/RC	
NA	NA	NA	NA	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requi

EXCEPTIONS

1. Use tile, ceramic or like quality.
2. Use tile, ceramic or like quality.
3. Relate directly to lounge with discrete entrance.
4. Install one toilet, two urinals and 2 sinks with hot and cold water.
5. Provide conduit terminations for media systems:

   COM/TLM

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
2-3	1	100	100

	II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	X	X	3	X		X	NA	NA	NA		NA	NA	NA	NA	NA	X	NA		X	4	X	5

Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

or like quality.

or like quality.

lounge with discrete entrance.

t, two urinals and 2 sinks with hot and cold water.

erminations for media systems:

SPACE

TOILET (Womens')

UNIT CAP. 2-4

NO. UNITS 1

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV.			
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	
X	1	NA	2		X	X	3	X		X	NA	NA	X		NA	NA	NA	

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions t

EXCEPTIONS

1. Use tile, ceramic or equal quality.
2. Use tile, or carpeting.
3. Relate directly to lounge. Entrance should be somewhat discrete.

   Provide separate area of 150 feet for rest area. Provide couch or day bed.
4. Install 3 enclosed toilets, and 3 sinks with hot and cold water.
5. Provide conduit terminations for media systems:

   COM/TLM

ns')	UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
	2-4	1	250	250

TURE			II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	2		X	X	3	X		X	NA	NA	X		NA	NA	NA	NA	NA	X	NA		X	4	X	5

N to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

ceramic or equal quality.

or carpeting.

rectly to lounge. Entrance should be somewhat discrete.

eparate area of 150 feet for rest area. Provide couch or day bed.

enclosed toilets, and 3 sinks with hot and cold water.

onduit terminations for media systems:

M

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ
RECEPTION	-	1	300

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDI			
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V
X	1	2	X		X	X	3	X		X	X	X	X		X	X	NA	X

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to Gen

EXCEPTIONS

1. No walls.
2. Exterior windows.
3. Provide direct access to school, administration and instructional area.
4. Provide conduit terminations for media systems:

   TV RAS
   COM/TLM

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
-	1	300	300

	II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	X	X	3	X		X	X	X	X		X	X	NA	X	NA	X	X		X	X	X	4

al Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

s.

ccess to school, administration and instructional area.

terminations for media systems:

RAS

F

OUTDOOR AREAS

CONCEPTUAL PLAN

The outdoor program will be designed to provide two or three different dimensio experiences. To help the child develop general physical fitness, an appreciati to develop the skills of motor coordination, and rhythms, to enjoy the fun of b that accommodates child behavior not conformed by adult sidewalks and paved area to develop a sense of his participation in the cycle of life, an understanding environmental role.

FACILITY IMPLICATIONS

- Three major areas are essential for this program. The first two, an appara area, are defined by specific square feet recommendations. The third, a co have specific limits, but can take small irregular portions of the site. N only slight development for nature trails and a water system. The activiti defined by the equipment located there, the grassy area should allow free p activities while the conservation areas will develop according to the progr any specific formal learning experience but just allow for experiences to h

F

OUTDOOR AREAS

gram will be designed to provide two or three different dimensions to the child's learning
o help the child develop general physical fitness, an appreciation of good sportsmanship,
skills of motor coordination, and rhythms, to enjoy the fun of being outdoors in a setting
es child behavior not conformed by adult sidewalks and paved areas of asphalt, and finally,
nse of his participation in the cycle of life, an understanding through participation in his
ole.

ATIONS

areas are essential for this program. The first two, an apparatus area and general grassy
efined by specific square feet recommendations. The third, a conservation area, need not
ic limits, but can take small irregular portions of the site. Natural settings may need
development for nature trails and a water system. The activities in the apparatus area are
he equipment located there, the grassy area should allow free play and low organization
while the conservation areas will develop according to the program and need not dictate
formal learning experience but just allow for experiences to happen.

AREA COMPONENTS

OUTDOOR AREAS

1) General Purpose Green

2) Apparatus Area

3) Conservation Area

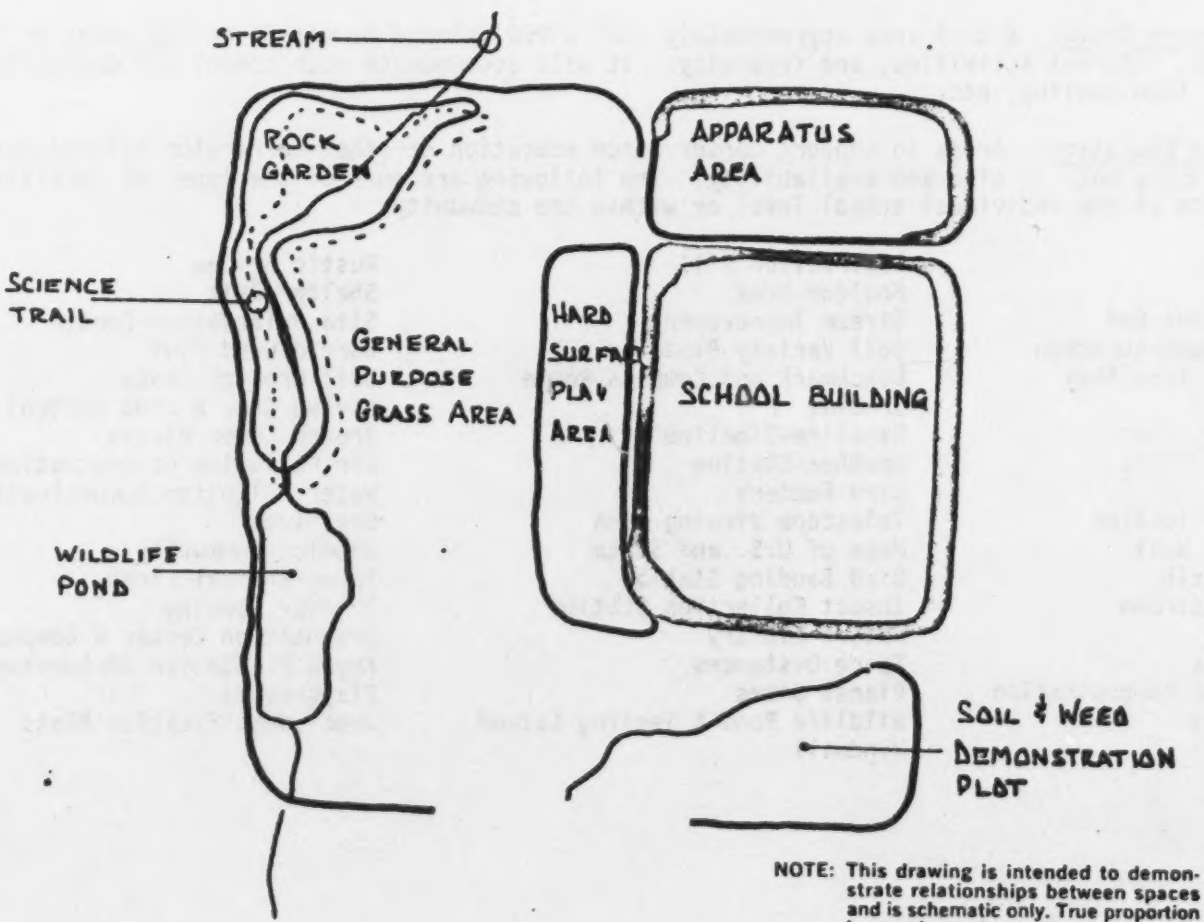
* Not specified, determined by program and land availability on site and

SQUARE FOOTAGE ALLOCATIONS

rpose Green	20,000
rea	2,500
n Area	*

termined by program and land availability on site and elsewhere.

SCHEMATIC OUTDOOR AREA



NOTE: This drawing is intended to demonstrate relationships between spaces and is schematic only. True proportion has not been observed, and shapes are not intended to represent desired design.

Apparatus Area: A space approximately 25' x 100' should be set apart for such eq
bars, vaulting bars, parallel bars, horizontal ladders, climbing ropes, etc. Thi
located near one side or end of the field game area and in such a way as to elimi
through that area. A less formal type of area may be provided through developmen
climbing devices, etc., in a fashion similar to an obstacle course so that indivi
engage in suitable balance and muscle building or toning activities.

General Purpose Green: A turf area approximately 100' x 200' should be set aside
organization, informal activities, and free play. It will accommodate such schoo
as croquet, lawn bowling, etc.

Conservation Education: Areas to support conservation education or other curricu
may vary greatly both in size and availability. The following are some of the ty
are desirable at the individual school level or within the community:

Rock Garden
Bulb Beds
Cold Frame-Hot Bed
Watershed Demonstration
Dwarf Fruit Tree Area
Nature Trail
Tree Nursery Plot
Animal Food Plots
Lawn Plots
Rock Identification
Retaining Wall
Footprint Walk
Outdoor Classroom
Fern Garden
Garden Plots
Soil Profile Demonstration
Swamp Garden
Water Wheel
Observation Hill
Boulder Area
Stream Improvement
Soil Variety Plots
Benchmark and Compass Route
Sundial
Baseline-Timeline
Weather Station
Bird Feeders
Telescope Viewing Area
Maps of U.S. and State
Bird Banding Station
Insect Collection Station
Nature Library
Space Distances
Planet Sizes
Wildlife Pond & Nesting Island
Windmill
Rustic Bridg
Shelter Belt
Site Orienta
Burned Land
Soil Erosion
Living Snow
Ground Cover
Air Pollutio
Water Pollut
Bee Hives
Woodlot Comm
Topographica
Outdoor Cook
Orientation
Keyed Planta
Playgrounds
Weed Identif

pproximately 25' x 100' should be set apart for such equipment as chinning
llel bars, horizontal ladders, climbing ropes, etc. This space should be
nd of the field game area and in such a way as to eliminate cross traffic
s formal type of area may be provided through development of balance beams,
n a fashion similar to an obstacle course so that individuals or groups can
e and muscle building or toning activities.

turf area approximately 100' x 200' should be set aside for games of low
tivities, and free play. It will accommodate such school and community games
etc.

reas to support conservation education or other curriculum related activities
ize and availability. The following are some of the types of facilities which
vidual school level or within the community:

Observation Hill
Boulder Area
Stream Improvement
Soil Variety Plots
Benchmark and Compass Route
Sundial
Baseline-Timeline
Weather Station
Bird Feeders
Telescope Viewing Area
Maps of U.S. and State
Bird Banding Station
Insect Collection Station
Nature Library
Space Distances
Planet Sizes
Wildlife Pond & Nesting Island
Windmill
Rustic Bridge
Shelter Belt
Site Orientation Center
Burned Land Plot
Soil Erosion Study
Living Snow & Wind Control
Ground Cover Plants
Air Pollution Demonstration
Water Pollution Demonstration
Bee Hives
Woodlot Community
Topographical Lines
Outdoor Cooking
Orientation Center & Compass Course
Keyed Plantation (Arboretum)
Playgrounds
Weed Identification Plots

G

MOBILE UNIT

AUDIOLOGICAL TESTING AREA
EDUCATION COMPONENT AREA

G

MOBILE UNIT

CONCEPTUAL PLAN

Young children love to learn, touch, explore and are naturally inquisitive. Opportunities for children to experience these activities should be readily available, both in the Regional Center and at other locations in the region.

Parent-infant education and evaluation must occur wherever the need exists within the region. It cannot be assumed that all potential learners can or should come to the Regional Learning Center. The age of the child, physical limitations of the child and/or parent, transportation restrictions caused by distance, lack of an automobile, or other conditions make the ability to work with children and their parents at remote points from the Regional Center paramount.

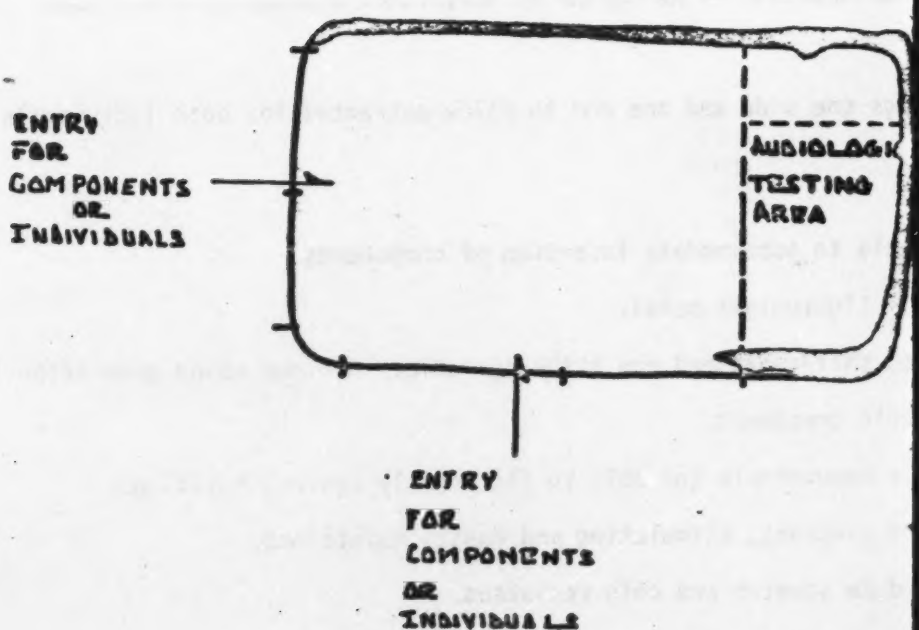
Children should be tested and/or evaluated for hearing limitations by trained professionals. Equipment for effective testing should be of high quality. Learning experiences for children, as well as parent training activities, should also be possible at remote locations of the region.

FACILITY IMPLICATIONS

- Facilities therefore should provide varied opportunities for children to discover, touch, observe, explore and experiment with.
- Evaluation and testing procedures should be possible.
- The facility should accommodate the exchange of a variety of educational and testing units with ease.
- The facility should accommodate 3 or 4 individuals in different activities simultaneously.
- The facility needs to have features allowing mobility, either self-contained or external.

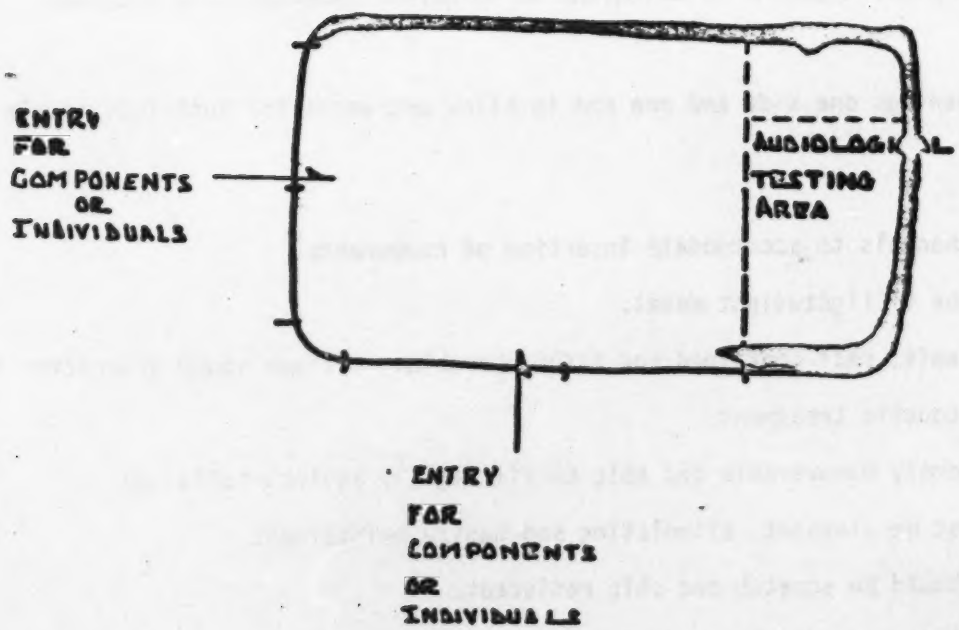
UNIT COMPONENTS	SQUARE FOOT ALLOCATIONS
MOBILE UNIT	
1) Audiological Testing Area	75
2) Education Component Area	125

SCHEMATIC



NOTE:

MATIC MOBILE UNIT



NOTE: This drawing is intended to demonstrate relationships between spaces and is schematic only. True proportion has not been observed, and shapes are not intended to represent desired design.

SPACE	UNIT CAP.	NO. UNITS	UNIT SQ. FT.
MOBILE UNIT	3-5	1	200

I. STRUCTURE					II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS						
Ceiling	Wall	Window	Floor	Other	Thermal	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS
1	2	3	4	5	6	7	8	9		10	11	12	13		14	15	NA	X	NA	NA	NA

X = NO EXCEPTION to General Requirements specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

1. Height, minimum 6'.
2. Walls must have large openings one side and one end to allow entrances for both individua units.
3. Windows for view.
4. Designed with rails or channels to accommodate insertion of components.
5. Entire structure should be of lightweight metal.
6. Heating and ventilating unit, self-contained and AC/DC operable. Minimum sound generatio
7. Ceiling and walls need acoustic treatment.
8. Entire unit must be extremely manuverable and able to fit tightly against buildings.
9. Interior color design must be pleasant, stimulating and easily maintained.
10. Surfaces and equipment should be scratch and chip resistant.
11. Equipment components include an audiometer and related accessories.

    a kitchen unit

    a bedroom unit

UNIT CAP.	NO. UNITS	UNIT SQ. FT.	TOTAL SQ. FT.
3-5	1	200	200

II. ENVIRONMENT					III. EQUIPMENT					IV. MEDIA SYSTEMS								V. UTILITIES			
	Acoustical	Spatial	Aesthetics	Other	Surfaces	Student Stations	Teacher Stations	Storage	Other	Audio	TV	CAI/CBI	A/V	IC/RC	COM/TLM	RAS	Other	Electrical	Plumbing	Mechanical	Other
	7	8	9		10	11	12	13		14	15	NA	X	NA	NA	NA		16	17	NA	18

ments specified in pages 25 to 44. NA = Not Applicable. Numbers refer to exceptions to General Requirements.

openings one side and one end to allow entrances for both individuals and equipment

r channels to accommodate insertion of components.

ld be of lightweight metal.

ng unit, self-contained and AC/DC operable. Minimum sound generation is essential.

l acoustic treatment.

xtremely manuverable and able to fit tightly against buildings.

must be pleasant, stimulating and easily maintained.

should be scratch and chip resistant.

nclude an audiometer and related accessories.

a toilet unit

a grocery store unit

other education experience units.

12. Teacher's work surface is required.
13. Mobile storage cabinets for paper and other instructional items.
14. Complete audio amplification units are required.
15. A mobile video tape recorder, camera and playback unit is required.
16. Electrical service requirements are AC/DC - 110 volt.
17. Fresh water and simple waste disposal facilities are required.
18. Closed circuit TV reception and standard TV reception are required.

APPENDIX

APPENDIX A

Several schools for hearing impaired children were visited by the Consultant as part of the project development. Various educational programs represented by the school facilities selected were observed. The results are relevant to the development of a significant facility specification for the State of Illinois and are summarized.

The schools listed are state residential schools, local school district schools, and private schools. Outstanding features of each program vis a vis building are described and the relevancy to the Illinois Regional Center noted.

STATE RESIDENTIAL SCHOOLS

The Illinois School for the Deaf (Jacksonville) and the Wisconsin School for the Deaf (Delevan) both as their respective states only public residential school for the deaf have children ranging in ages from pre-school through high school level. The Western Pennsylvania School for the Deaf (Pittsburgh) is one of two public residential schools in the State. The Pennsylvania school provides a program for pre-school through high-school level also.

The three school programs provide basic learning experiences for the pre-school and elementary school year children. However, both Illinois and Wisconsin schools provide extensive vocational educational opportunities at the secondary level, while the Western Pennsylvania school has only a minimal program.

The elementary program at the Illinois School for the Deaf is built around a small group of children working with their assigned teacher. Special teachers work with the children for counseling and physical education experiences. The children live in their school "home".

At Delevan, the program also brings a small group of children into close interaction with one teacher. The Western Pennsylvania school includes its children in clusters of groups, each with a teacher, but two or three teachers sharing some common responsibilities for the entire group.

In all three schools, the secondary school students meet many teachers for their specific academic or vocational subjects.

Of particular significance to Illinois Regional facilities were the instructional areas at Jacksonville and Delevan for play and indoor activity. At Jacksonville, a large multi-purpose area was adjacent to the classrooms. In the Delevan school, a large, circular room with suspended floor was available to all children in the elementary building. The suspended floor should allow for vibrations to be felt more directly by the children.

In Pittsburgh, although the building was older than either the other two buildings, provision for small instructional spaces immediately off a large work/play area provided a most effective team-teaching arrangement.

Both Illinois and Wisconsin high schools have extensive vocational programs and, therefore, have hugh complexes of vocational areas. The programs appear largely dictated by the specific identification of each area by equipment, with the exception of a general inquiry or exploratory shop at Delevan.

Standard classrooms appear in all high school facilities at the three schools. A new high school building at Jacksonville proposes to have a Learning Resources Center somewhat contiguous to some of the classrooms, not all.

PUBLIC SCHOOLS

Elementary school programs in the Chicago City Schools are conducted in seven elementary school buildings housing both hearing and deaf children.

The Centennial School in Warminister, Pennsylvania, although housing children with learning disabilities, not including deaf, and children without learning disabilities was designed to contain a program of many activities. Most significant of all the activities is a program designed to stimulate the child vicariously through a nearly 360 degree audio-visual environmental room.

St. Louis County (Missouri) Special Education District has a program for elementary children with physical, mental and hearing disabilities. All children are contained in one large facility that has specific sections designed for the child's particular learning needs.

In all of the public school programs, all day centers, a mix of hearing, deaf or hearing, physically limited, or physically and auditorily limited children share common space with provision for space designed to enhance the educational program.

Warminister and St. Louis facilities have particular provision for extending learning experiences through specialized spaces, i.e. total immersion in an audio-visual environment, swimming pool, counseling, guidance and evaluation/testing areas, crafts and home-making areas.

The St. Louis school has detailed some classrooms with an induction loop amplification system and others with an r.f. system. The r.f. system, while much more costly does generally provide a better system for deaf children.

Classrooms have two artificial lighting systems, one a standard florescent unit and an incandescent system that is controlled by rheostat. The function of the florescent is to provide good light at work surfaces; the incandescent, to provide illumination of varying intensities, particularly useful during film showing.

PRIVATE SCHOOLS

St. Josephs, in St. Louis, Missouri, conducts a program for pre-schoolers through the 8th grade equivalent. Children are provided a strong academic program and strong oral program. Groups of 10 to 15 children study with one teacher in the elementary grades, but move to a specialist program in the upper elementary grades.

Classrooms are designed for small groups and contain standard work tables and movable chairs. A large audio-visual laboratory and a well equipped testing area is adjacent to the instructional areas.

APPENDIX B

EQUIPMENT FOR HEARING IMPAIRED CLASSROOMS

PRESCHOOL

Furniture

1 Rectangular table 18"
2 Per child - chairs 10" & 12"
1 Teacher's desk
1 Adult chair (teacher)
2 14" chairs
1 Teacher's 2 drawer file
1 Portable speech mirror (swinging)
Carpeting
Blackboards - low
1 Step stool-seat combination
1 Round table
1 Aid's desk
1 Aid's file
1 Adult chair (aid)
2 Adult folding chairs (visitors)
1 Long dress mirror
Low toilet facilities with sink
Toy storage cabinets
2 Easels
2 Trapezoid tables
1 Book display rack
Poster storage cabinet
TV available
Room divider bulletin board
Draperies to block light

Audiovisual

1 Group auditory training unit with phonograph
1 Group auditory training unit stand or table
1 Overhead projector with table or stand
1 Screen attached to wall at an angle
1 Audio-Flash Card-EFI-for Hard-of-Hearing
*1 Polaroid camera
*1 Thermofax
*1 Primary typewriter
*1 Tape recorder (to synchronize sound on 8mm projector)
*1 Filmstrip projector with slide attachment
*1 16mm movie projector
*1 Super 8mm home movie camera with sound attachment
*1 Combination reg. & super 8mm projector with sound attachment (Bell & Howell)
*1 Opaque projector
*1 Portable auditory training unit
*1 Slide camera
1 Portable screen
*1 Technicolor instant projector cartridge - super 8mm

* These can be shared by rooms or readily available for teacher's use.

EQUIPMENT FOR HEARING IMPAIRED CLASSROOMS

PRESCHOOL

Play Equipment

1 Basic climbing unit
Wooden blocks - large & small
Block storage
Shape blocks
Wooden toys - planes, trucks, cars, etc.
Wooden kitchen toys - stove, refrigerator, table, chairs, sink, dishes, boy & girl dolls, ethnic dolls
Corregated blocks
2 Tricycles - med. & small
1 Wagon
Dress up clothes & hats - old
Doll beds
Doll buggy
Rocking chairs, large & small
Telephones
Balance beams
Traffic signs
Sand and water table

Classroom Materials & Supplies

Teaching Aids

Doll house (small) with furniture
Flannel board or hook & loop
2 Chart racks
Aquariums
Noise makers - drums, rattles, bells, rhythm bnad
Slot charts - Plymouth charts
Speech charts
X-ray film - use on overhead
Transparency sets for preschool
Vis-a-Vis color overhead pens
Color adhesive for overhead
Transparencies
Records
Soft toy animals
Pins and safety pins
"Whats Its Name" book & record
"Sights and Sounds"
"See It, Say It, Use It" St. Joseph Institute
Paper cutter

Child Development

Tool table
Puzzle, many 4-10 piece with rack
Pegboard
Zipper-button-tie boards
Sense materials for preschool
Dolls and clothes
Small muscle coordination toys
Parquetry blocks
Educational games - preschool
Perceptual games - preschool
Paint supplies
Scissors
Preschool books
Chalk - colored & fat
Balls
Clay
Rest Cots

EQUIPMENT FOR HEARING IMPAIRED CLASSROOMS

PRIMARY

Furniture

1 Rectangular table 20"-22"
2 Per child - chairs (proper size)
1 Per child - desks inc. seats
1 Teacher's desk
1 Teacher's chair
1 Teacher's file - two drawer
1 Portable speech mirror (swinging)
Carpeting
Blackboards - proper height
1 Step stool-seat combination
1 Round table 20"-22"
2 Adult folding chairs (visitors)
Low toilet & sink facilities
Storage cabinets
2 Easels
2 Trapezoid tables 20"-22"
1 Book display rack
1 Piano with wooden base
1 Standard sink
1 Poster storage cabinet
1 TV available
Room dividers
Draperies to block light
1 Refrigerator
1 Stove
1 Washer-Dryer

Audiovisual

1 Group auditory training unit
1 Group auditory training unit stand or table
1 Overhead projector with table or stand
1 Screen attached to wall at angle
1 Language Master or Audio-Flash Card (EFI)
*1 Polaroid camera
*1 Thermofax
*1 Primary typewriter
*1 Tape recorder (to synch. sound with 8mm projector)
*1 Filmstrip projector with slide attachment
*1 16mm projector
*1 Super 8mm home movie projector (with sync. sound) Bell & Howell
*1 Opaque projector
*1 Portable auditory training unit
*1 Slide camera
1 Portable screen
*1 Technicolor instant projector-cartridge-super 8mm

* These can be shared or readily available for teacher's use.

Play Equipment

Balance beam
Other play equipment as to the needs and maturity of the children. At this level they should be playing with educational games and toys.

EQUIPMENT FOR HEARING IMPAIRED CLASSROOMS

PRIMARY

Classroom Materials & Supplies

Teaching Aids

Flannel board or hook & loop
2 Chart racks
Aquariums
Noise makers for primary
Slot Charts
Speech charts
X-ray film
Transparency sets for primary
Vis-a-Vis color overhead pens
Color adhesive for overhead
Transparencies
Records
"Whats Its Name" a book & record
"Sights and Sounds"
"See It, Say It, Use It" St. Joseph Institute
Paper cutter
Chart tablets
Sentence strips
Story paper
Poster board & tag board
Primary science equipment

Child Development

Sense materials for primary
Parquetry blocks
Educational games-primary
vocabulary, numbers, etc.
Perception games
Paint supplies
Scissors
Primary books
Balls
Clay
Lincoln logs
Manipulative devices & primary toys
Instructional toys
Puppets

Child Development (Continued)

Maps and globes
Reading readiness materials -
charts-stands-alphabet, consonant, vowel picture sequence flash cards-etc.
Reference books
Pictionaries Books I & II
Tool Table
Many puzzles for primary
News Prin
Pegboard
View-Master
Julie & Jack series (St. John's School for Deaf)
Dolche crossword puzzle books
Math games - flash cards-counting sticker blocks-
abacus-money-number line
Calendar - day by day
Clock "by Judy"
Sequence puzzle "by Judy"
Story sets
Community helpers
Continental Press Catalogue

EQUIPMENT FOR HEARING IMPAIRED CLASSROOMS

INTERMEDIATE

Furniture

1 Rectangular table (approp. height)
2 Per child - chairs (approp. height)
1 Per child - desks inc. seats
1 Teacher's desk
1 Teacher's chair
2 Adult chairs
1 Teacher's file - two drawer
1 Portable speech mirror (swinging)
Carpeting
Blackboards (approp. height)
1 Step stool-seat combination
1 Round table (approp. height)
2 Adult folding chairs (visitors)
Toilet and sink (approp. size)
Storage cabinets
2 Easels
2 Trapezoid tables (approp. height)
1 Book display rack
1 Piano with wooden base (floor)
1 Standard sink
1 Poster storage cabinet
1 TV available
Room dividers
Draperies to block light
1 Refrigerator
1 Stove
1 Washer & Dryer

Audiovisual

1 Group auditory training unit
1 Group auditory training unit stand or table
1 Overhead projector with stand or table
1 Screen attached to wall at angle
1 Language master or audio-flash card (EFI)
*1 Polaroid camera
*1 Thermofax
*1 Primary typewriter
*1 Tape recorder (to sync. sound with 8mm projector)
*1 Filmstrip projector with slide attachment
*1 16mm projector
*1 Super 8mm home movie camera (with sound attachment)
*1 Reg. and super 8mm projector (with sync. sound) Bell & Howell
*1 Opaque projector
1 Portable screen
*1 Slide camera
*1 Portable screen
*1 Technicolor instant projector - cartridge-super 8mm
*1 Typewriter (reg. type)

* These can be shared or readily available for teacher's use.

EQUIPMENT FOR HEARING IMPAIRED CLASSROOMS

INTERMEDIATE

Materials

Teacher Aids
2 Chart racks
Flannel board or hook & loop
Aquariums
Noise makers for intermediate
Slot charts
Speech charts
X-ray film
Transparency sets for intermediate
Vis-a-Vis color overhead pens
Color adhesive for overhead
Transparencies
Records
Maps & globes
Moon globe
Chart tablets
Sentence strips
Posterboard & tag board
Intermediate science equipment
Continental Press Catalogue

Child's Development
Many puzzles for intermediate
Parquetry blocks
Educational games - intermediate
vocabulary, math, etc.
Perceptual games - intermediate
Paint supplies
Scissors
Books - intermediate level
Balls
Clay
Erecting toys (put together, take apart)
Puppets

Child's Development (Continued)
Instructional games for intermediate
Sentence building games
Proper words (word cards)
Reference books
"World Book"
Beginning & Junior dictionaries - Thorndyke
News print
View Master
Dolche Crossword Puzzle books
Math games, flashcards, money, counting sticks or
blocks, abacus, number line, etc.
Clock "by Judy"
Thermometer
Liquid measurement kit
Atlas
DLM materials
Peabody kit
SRA reading lab
Readers Digest skillbuilders
"Macmillan Vocab Development Spectrum"
"Know Your World" weekly reader
True book series

EQUIPMENT FOR ITINERANT TEACHERS AND TUTORS

The teacher should have an adequate, well lighted room, free from scheduling problems. Since the materials she uses are on such variable levels, she should be able to check out any material she needs to work with the children.

The room should be equipped with:

Chairs and tables
Auditory Training Unit (portable)
Speech mirror (portable)

APPENDIX C

PART I - NEW CONSTRUCTION COST ESTIMATES

Estimating costs of construction and equiping a school facility are complex processes. Construction costs vary widely from area to area, and season to season. Equipment prices vary widely on the factor of quality and quantity. For the purpose of providing only an estimate, we have provided the following information.

ASSUMPTION: The Regional Center to educate 108 children distributed in four age groups, pre-school, primary, intermediate and multi-handicapped on the following basis.

NO. OF CHILDREN	GROUP
18	Pre-School
54	Primary
18	Intermediate
18	Multi-Handicapped
108	

Space required for this student population follows:

INSTRUCTIONAL LEARNING UNITS

	Age Group	No. of Units	Sq Ft Per Unit	Total Sq Ft
1. Large Group Areas	Pre-School	1	1,400	1,400
	Primary	3	1,400	4,200
	Intermediate	2	1,200	3,400
2. Instructional Unit	Pre-School	3	520	1,560
	Primary	9	520	4,680
	Intermediate	3	520	1,560
	Multi-Handicapped	3	725	2,175
		[18 units]		
3. Counseling Area		1	300	300
4. Teacher Planning Area		1	2,200	2,200
5. Learning Experiences Center		1	2,080	2,080
6. Special Facilities				
Crafts		1	1,400	1,400
Home Management		1	1,400	1,400
Sub-Total				25,355

ADMINISTRATION

	No. of Units	Sq Ft Per Unit	Total Sq Ft
1. Director's Office	1	150	150
2. Conference	1	200	200
3. Secretary	1	120	120
4. Reception	1	150	150
5. Storage	1	200	200
6. Toilets	1	100	100
Sub-Total			920

LEARNING RESOURCES CENTER

1. Library			
Stacks/Reading	1	1,500	1,500
Carrel Area	1	450	450
Reference	1	200	200
Periodicals	1	150	150
Staff Workroom	1	400	400
Staff Office	1	150	150
Control Area	1	75	75
Typing Area	1	200	200
Seminar Area	1	100	100
2. Multi-Media			
Master Control	1	500	500
Equipment Storage	1	200	200
Material Preparation	1	800	800
Media Storage	1	150	150
Sub-Total			4,875

CHILDREN'S EDUCATIONAL EVALUATION CENTER

	No. of Units	Sq Ft Per Unit	Total Sq Ft
1. Evaluation Area			
Audiologist	1	100	100
Audiologist's Asst	1	75	75
Testing Area	1	200	200
Psychologist	1	100	100
Psychologist's Asst	2	100	200
Interns	3	50	150
Conference	1	200	200
General Offices	7	75	525
Psychiatrist	1	100	100
Consultant's Office	1	150	150
Speech and Aural Rehabilitation	1	100	100
Speech Diagnosis	1	100	100
Social Workers	3	75	225
Conference	1	200	200
2. Research Area			
Office	1	120	120
Observation	1	600	600
Equipment Area	1	600	600
3. Professional Area			
Library	1	400	400
Sub-Total			4,145

SERVICE AREA

	No. of Units	Sq Ft Per Unit	Total Sq Ft
1. Staff Lounge	1	600	600
Toilets			350
2. Reception	1	300	300
Sub Total			1,250
Total Net Square Footage			34,545
Square Footage for Circulation & Building Structure (30% of Total Building Area)			15,455
Total Gross Square Footage			50,000

ASSUMPTION: Dollar cost per square foot of construction - $30.00

Building Construction Cost $1,500,000

ASSUMPTION: Cost of furnishing and equiping a class area: $10,000

ASSUMPTION: A class area includes all areas related to or in support of the class function; i.e. administration, LRC, etc. There are, for this estimate, 18 class areas: $180,000

ASSUMPTION: For each class unit an electronic amplifying system costs:

$2,500
18 units

$45,000 $45,000

ESTIMATED COSTS, ALL COMPONENTS	
Construction	$1,500,000
Furnishings	180,000
Electronic Systems	45,000
TOTAL ESTIMATED COSTS, ALL COMPONENTS	$1,725,000

PART II - RENOVATION COST ESTIMATES

The renovation of existing school facilities are necessary for the use of hearing impaired programs. Estimating costs of renovating an existing building are even more complex than for new construction. Age of the existing building, heating and ventilation systems installed, fire, and emergency systems installed, plus all the other factors involved in new construction make cost analysis difficult, if not virtually impossible.

For our purposes here some basic assumptions are made:

ASSUMPTION: Existing building meets all current fire safety codes.

Adequate heating and ventilation and plumbing systems are installed.

Age of building is not a factor.

Each instructional space is 900 square feet.

Each instructional space will have: carpet throughout; acoustical treatment to ceiling surface; audio amplification system installed; lighting systems for work and audio-visual presentations; and window darkening shades.

Estimates for these items per instructional area: Carpet - 100 square yards.

ASSUMPTION: Carpet cost $10.00 per square yard for good quality commercial floor covering:

100		
$10		
$1,000	-	$1,000
Acoustical Treatment for Ceiling		1,500
Audio Amplification Installation		2,500
Lighting for Work		1,750
Lighting for Audio-Visual Presentations		1,750
Window Darkening Drapes		200
Total Estimate Cost Per Unit for Renovation Exclusive of Furnishings or Equipment		$8,700

END

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